

SYNOPSIS OF THE RESULTS OF THE OPERATIONS OF
THE GREAT TRIGONOMETRICAL SURVEY OF INDIA
VOLUME XXXI.

DESCRIPTIONS AND CO-ORDINATES
OF THE
PRINCIPAL AND SECONDARY STATIONS AND OTHER FIXED POINTS OF
THE KILANPISURA MERIDIONAL SERIES
OR SERIES G
OF THE
SOUTH-WEST QUADRILATERAL.

PREPARED IN THE OFFICE OF THE TRIGONOMETRICAL BRANCH, SURVEY OF INDIA,
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PUBLISHED UNDER THE ORDERS OF
COLONEL H. R. THUILLIER, R.E., SURVEYOR GENERAL OF INDIA.



Dehra Dun:

PRINTED AT THE OFFICE OF THE TRIGONOMETRICAL BRANCH, SURVEY OF INDIA

B. V. HUGHES.

1893.

Price Two Rupees.

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ERRATA ET ADDENDA.



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- 34—*G.* in col. 3, at Kanad h.s., azimuth of Andaner Peak *for* $171^{\circ} 16' 32''$ *read* $187^{\circ} 0' 32''$
- 42—*G.* The height 2243·74 feet of Anakvádi, XXV, refers to the mark-stone in the upper surface of the platform.
- 47—*G.* The height 1164·81 feet of Dhanvár, XXIV, refers to the mark-stone in the upper surface of the platform.

February, 1893.

J. ECCLES,

In charge of Computing Office.

REFERENCES.



The abbreviations employed in the text are as follows:—

h.s. denotes hill station (secondary),
s. " station "

These abbreviations are only placed after stations where a theodolite has been set up and observations taken to surrounding points.

The latitudes and longitudes of all points shown on the Chart at the end of the volume will be found in the text. The latter exhibits numerical values of triangles only to points of a superior class, to which alone, if exhibited on the Chart, lines are drawn: the lines are either continuous throughout, or dotted for half the length and continuous for the other half: the dots indicate that the bearing was not observed. For other points difficult to identify or of comparatively less accuracy, numerical values of triangles and azimuths are not given.

February, 1893.

J. ECCLES,
In charge of Computing Office.

P R E F A C E.

The Khánpirra Meridional Series, the details of which are given in this volume, forms one of the internal chains of the South-West Quadrilateral, or that section of the triangulation of India which lies between parallels of 15° and 25° and between the meridian of 75° and the Arabian Sea. The general principles of the simultaneous reduction, and the procedure followed in carrying it out, are explained in Volume II of the *Account of the Operations*, &c.; and full details of the whole of the principal triangulation appertaining to the Quadrilateral will be found in Volume XIV of the *Account of the Operations*, &c.

As however the entire contents of the volumes of the principal triangulation are not needed by geographers and surveyors, and moreover as these volumes give no details of the secondary triangulation—which is of considerable value for local requirements—it is obviously desirable that synopses of the final results of the whole of the operations, including the secondary as well as the principal triangulation, should be published for general use in such a form as to be most suitable for convenience of reference. This has already been done as follows:—

For the several Series forming the North-West Quadrilateral,

- I. Great Indus Series.
- II. Great Arc, Section 21° to 30° .
- III. Karachi Longitudinal Series.
- IV. Gurdárah Meridional Series.
- V. Rahún Meridional Series.
- VI. Jogí-Tila and Suttlej Series.
- VII. North-West Himalaya Series.
- VII A. Jodhpore and Eastern Sind Meridional Series.

For those forming the South-East Quadrilateral,

- VIII. Great Arc, Section 15° to 21° .
- IX. Jabalpur Meridional Series.
- X. Bider Longitudinal Series.
- XI. Bilápur Meridional Series.
- XII. Calcutta Longitudinal Series.
- XIII. East Coast Series.
- XIII A. South Párasnáth and South Maláchna Series.

} Already published.

For those forming the North-East Quadrilateral,

- XIV. Budhon Meridional Series.
- XV. Rangir Meridional Series.
- XVI. Amua and Karára Meridional Series.
- XVII. Gurwáni and Gora Meridional Series.
- XVIII. Huriláong and Chendwár Meridional Series.
- XIX. North Párasnáth and North Malúncha Meridional Series.
- XX. Calcutta and Brahmaputra Meridional Series.
- XXI. East Calcutta Longitudinal and Eastern Frontier Series, Section 23° to 26°.
- XXII. *Assam Valley Triangulation, E. of Meridian 92°.

Already published.

For the following Series of the Southern Trigon, viz.,

- XXIII. South Konkan Coast Series.
- XXIV. Mangalore Meridional Series.
- XXV. South-East Coast Series.
- XXVI. Bombay Longitudinal Series.
- XXVII. Madras Longitudinal Series.
- XXVIII. Madras Meridional and Coast Series.
- XXIX. Great Arc, Section 8° to 18°. (*In press*).

And for the following Series of the South-West Quadrilateral:—

- XXX. Abu Meridional and Gujarát Longitudinal Series. Already published.

The present is the 32nd Synoptical Volume in order of publication, and the second of those appertaining to the South-West Quadrilateral; it gives the results both of the principal triangulation executed exclusively with theodolites having azimuthal circles of 15 and 24 inches in diameter, read by three and five micrometer microscopes respectively, and of the secondary triangulation in which other instruments besides the 15-inch theodolite were used.

By the process of reduction which has been followed, the principal triangulation has been rendered perfectly consistent both internally and externally; internally, so that if in any one of the several polygonal figures of which the chains may be composed, calculations are carried from one station to another in every possible direction, the same results will be inevitably deduced; and externally, so that the values of the co-ordinates of any station, when computed from the given co-ordinates of any other station, with the final linear and angular data, will be the same, whether the calculation is carried directly through the Series, or circuitously through any of the other chains of triangles comprising the South-West Quadrilateral. All secondary triangulation emanating from one side of the principal Series and closing on another side thereof, or on a contiguous Series, have also been made consistent throughout.

As regards the general arrangement of this volume, it may be pointed out that the Introduction to the Series was originally prepared for Volume XIV of the *Account of the Operations, &c.*, and when a sufficient number of copies had been printed for that work, additional copies were struck off for this volume. The Introduction gives a historical and descriptive sketch of the progress of the whole operations in the field—both principal and secondary—from year to year, mentions the Officers by whom they were conducted, the theodolites with which principal angles were measured, and indicates the work done by each of the Assistants. The adjustment of the secondary triangulation was taken in hand in the year 1892, and completed in the same year when the printing of the volume was resumed.

The data given in this volume are the following:—

First (page 1—*G.*), an alphabetical list of the names of the principal stations, showing the numbers assigned to them.

Second (page 2—*G.*), a numerical list giving the names corresponding to the numbers.

Third (page 3—*G.*), descriptions of the structure and positions of the principal stations.

Fourth (page 12—*G.*), the angles and sides of the principal triangles.

* This is an offshoot of the Assam Longitudinal Series, and falls entirely outside of the limits of the North-East Quadrilateral. The volume is issued in a preliminary form, and therefore only a limited number of copies are available to meet any immediate demand for data: the final publication will be hereafter made on the completion of the triangulation in Burma, into the general reduction of which this Series will enter.

Fifth (page 16—*a*), the angles and sides of certain secondary triangles. The numbering is here made consecutive to that of the principal triangles, in order to facilitate references which are made in other sections to the place where the length of a side is to be found.

Sixth (page 30—*a*), the azimuths of surrounding stations and points at principal, principal-auxiliary and secondary stations, the latter arranged in alphabetical order.

Seventh (page 41—*a*), the co-ordinates and descriptions of all stations and points arranged in alphabetical order.

It has not been considered necessary to publish the whole of the details of the secondary triangulation; the sides and angles of 304 triangles, which were selected as most likely to be of future use, and the azimuths of all these sides, have been given; but for a number of other points the co-ordinates only have been given. With the aid of Tables Nos. XXVI, XXVII, XXVIII, XXIX and XXX of the *Auxiliary Tables to facilitate the calculations of the Survey of India*, Dehra Dûn, 1887, surveyors, working on a system of rectangular co-ordinates, can readily transform the spheroidal co-ordinates here given to suit their requirements.

The heights above mean sea level of the stations depend on the final trigonometrically determined values of Bûda and Bâligara stations of the Karâchi Longitudinal Series of the North-West Quadrilateral and on the spirit-levelled value of Âgargaon station of the Bombay Longitudinal Series of the Southern Trigon, and are further controlled by lines of spirit-levelling crossing the Series. All particulars regarding the heights will be found detailed on page 41—*a*, as well as in the footnotes to the subsequent pages.

The longitudes depend on an astronomically determined value of the longitude of the Madras Observatory, deduced about the year 1815. The longitude of the Madras Observatory has however been re-determined by the Electro-Telegraphic method, from observations made at Greenwich, Mokattam (in Egypt), Suez, Aden, Bombay and at certain stations of the triangulation in India.

This value of the longitude of the Madras Observatory is equivalent to $80^{\circ} 14' 51''$ E.; and as the originally adopted value, on which the longitudes of the whole of the stations of this Survey are based, is $80^{\circ} 17' 21''$ E.—see page 135 of Volume II of the *Account of the Operations*, &c.—the following precept may be accepted with considerable confidence:—

**All the values of longitude in this volume require a constant correction,
probably of $-2' 30''$.**

The orthography of Indian names in the present volume is in accordance with the provincial lists of spellings constructed under the immediate orders of the Government of India. The newly authorised spellings were adopted for all names and other words contained in these lists; but for words for which there was no specific authority, the spellings have been framed in accordance with the methods followed in the preparation of the published lists, reference being made in the present instance more particularly to the *Gazetted Lists for the Bombay Presidency, Nizam's Territory and Central India Agency*. As a general rule the pronunciations of the vowels are as follows:—*a* has a variable sound as in *woman*, *rural*, *paltry*; *â* as in *tartan*; *i* as in *bit*; *î* as in *ravine*; *u* as in *bull*; *û* as in *rural*; *o* as in *note*; *e* as *a* in *say*; *au* as *ou* in *cloud*; *ai* as *i* in *ride*. Final vowels and those in well-known terminals are unaccented. When the popular spelling of a name has been accepted by Government, its correct orthography is generally given in parenthesis where the name occurs for the first time.

The chart accompanying this volume shows all the principal stations and triangulation, the positions of all secondary points, and those portions of the secondary triangulations of which full details of the angles, sides and azimuths are given. With the aid of the chart it is hoped that little difficulty will be met with in finding out any of the data which may be required. The descriptions of the secondary stations and points are in some cases not as full and clear as might be desired: this arises from the inadequacy of the information entered on the spot by the surveyors in their field books; every effort has been made to supplement the field books, whenever it was found practicable to do so, in order to facilitate the future identification of the stations, and all the information which is forthcoming has now been given.

The general arrangement of the volume is in accordance with that adopted in previous Synoptical Volumes. The data which it contains have been prepared chiefly under the superintendence of Mr. J. Eccles, M.A., Deputy Superintendent, the Officer in charge of the Computing Office. The Introduction to the Series was written by Captain S. G. Burrard, Deputy Superintendent. The volume like its predecessors has been printed at the Trigonometrical Branch Office at Dehra; Mr. Poychers has rendered valuable service in the examination of the press proofs generally, and more particularly in regard to the preparation and final revision of the letter press and numerical details which require the utmost care, and in this respect from his natural aptitude and experience his assistance has been most valuable.

DEHRA DUN, }
February, 1892. }

G. STRAHAN, COLONEL, R.E.,
Dy. Surveyor General,
In charge Trigonometrical Surveys.

KHANPISURA MERIDIONAL SERIES.

KHANPISURA MERIDIONAL SERIES.

INTRODUCTION.

The Khánpisura Meridional Series of the South-West Quadrilateral is the great chain of principal triangles that follows the meridian of $75\frac{1}{2}^{\circ}$ from the parallel of 19° to that of $24\frac{1}{4}^{\circ}$. Its southern extremity is in the dominions of the Nizam, and it passes through Khándesh and Central India. It consists of one compound figure, two double and two single polygons, and four quadrilaterals, and extends over a meridional distance of 360 miles. Its name is derived from the station of Khánpisura of the Bombay Longitudinal Series.

The series lies between the side Búda (xxi)—Bálágara (xxiv) of the Karáchi Longitudinal Series and the side Chíncholi (xxiii)—Ágargaon (xxiv) of the Bombay Longitudinal Series. In the simultaneous reduction of the South-West Quadrilateral, it had therefore to be fitted in between a finally fixed side of the North-West Quadrilateral and another of the Southern Trigon: on the completion of this reduction it was found that the errors which had actually been dispersed between the two fixed terminals were as follows:—

In Latitude of Ágargaon (xxiv)	...	...	...	—	0".635
„ Longitude of „ „	...	...	...	—	0.566
„ Azimuth of Ágargaon (xxiv)—Chíncholi (xxiii)	...			—	7.808
In side {	Logarithm of feet	...	...	...	+ 0.000,0190,3
	giving a ratio of about 2.78 inches per mile.				

Observations for the direct determination of azimuth have been taken at two stations of the Khánpisura Meridional Series, *viz.*, Valvádi and Indrawán.

In 1845 when the North Konkan or Singí Series had been carried as far north as the parallel of $21^{\circ} 45'$, it was found necessary to temporarily abandon it, as the health of the party had suffered so terribly in its execution. Lieutenant Harry Rivers of the Bombay Engineers, the Officer in charge, was accordingly directed in October, 1845, to start a new

series of triangulation from a side of the Bombay Longitudinal Series and carry it due north along the meridian of 75° .

The sides of the old Bombay Longitudinal Series that Rivers adopted as bases for

Season 1845-46.

PERSONNEL.

Lieutenant H. Rivers, Bombay Engineers, 2nd
Assistant G. T. Survey.

Mr. J. Fraser, Sub-Assistant 1st Class.

" T. Sanger, " 2nd Class.
" J. DeCosta, " 2nd Class.

the new chain were Párner-Khánpisura and Khánpisura-Sautára*, and the first stations he selected were those of Ágargaon and Chineholi. By the end of December 1845 he had completed the triangulation up to the side Dhaigaon-Mathuri, and by the middle of January he had by means of two new single triangles reached Yerul-

Jámkhed. On this latter side he constructed a pentagon round Pophla as a centre which advanced the triangulation as far north as Sámála-Sirsála. He then proceeded to Surat to take some observations at stations of the Singi Meridional Series, which he had had to relinquish the previous year, and he was occupied with these till the close of the field season.

In the Introduction to the Singi Meridional Series an account is given of the great difficulties that Lieutenant Rivers encountered in the execution of that Series, and of his repeated failures to extend it through the Dáng jungles; he had in fact been unable to carry it north of the parallel $21^{\circ} 45'$, and at this point it was now standing in abeyance.

In the summer of 1846 Rivers proposed to Sir Andrew Waugh to connect the Singi and Khánpisura Series in latitude $20^{\circ} 30'$ by means of three single triangles, one on the side of the Khánpisura Series, Sirsála-Sámála, one on the side of the Singi Series, Ankal-Sáler, and one between, and to convert the two present Meridional Series from this point northwards into one on the meridian of $74^{\circ} 45'$: this new series he explained would run through Khándesh and Malwa (Málwa), where there were a succession of hills, which they had not the benefit of in the plains of Gujarát, and which moreover did not extend sufficiently to the east to allow of being utilised for the Khánpisura Series: the atmosphere too would be more favorable for trigonometrical work, being higher and further from the haze of the coast. Sir Andrew Waugh, who still believed in the feasibility of extending the Singi Series, refused to sanction Rivers' proposal on the grounds that it was not in keeping with the system of the Indian triangulation, and directed that both Meridional Series should be kept distinct and unconnected. The party passed the recess season of 1846 at Poona.

On October 9th, 1846, Rivers began observing an astronomical azimuth at Khánpi-

Season 1846-47.

PERSONNEL.

Lieutenant H. Rivers, Bombay Engineers, 2nd
Assistant G. T. Survey.

Mr. J. Fraser, Sub-Assistant 1st Class.

" T. Sanger, " 2nd Class.
" J. DeCosta, " 2nd Class.

sura, which was not completed till October 21st, owing to cloudy and boisterous weather. He then re-observed the angle at Párner between Khánpisura and Ágargaon and also that at Khánpisura between Párner and Ágargaon, as they had been taken before on but three pairs of zeros†. The next stations he visited were Sirsála and Sámála,

* The three northern triangles of the Khánpisura Heptagon appertained originally to the Khánpisura Meridional Series; the whole Heptagon is now included in the Bombay Longitudinal Series, and consequently belongs to the Southern Trigon.

† These measures were not utilized in the calculation.

which are situated on the northern edge of the Ajanta range of gháts and from which a clear view to the north can be obtained all the way to the Sátputa range. From these stations, at each of which two angles remained to be observed, a further extension of the Khánpisura Series was commenced. After leaving Valvádi, where he had observed an astronomical azimuth, the country became very desolate; there were no villages and no roads, and dense jungle lay in every direction.

At Thikri a letter arrived from Mr. Sanger, who was in charge of the approximate work, reporting that he had great difficulty in selecting a strong and suitable figure immediately to the north of the parallel of 22° , owing to the country in the Malwa Districts being a perfect plain. Leaving the theodolite and the greater part of his camp at Thikri, Rivers pushed on in advance to help his assistant; after three weeks hard work he succeeded in laying down an excellent figure, the Mograba Hexagon, and returned to Thikri to resume the observations of the principal angles. By the middle of April, 1847, he had carried the Khánpisura Series as far north as the side Harnása-Indrawán, and at the latter station had observed an astronomical azimuth. He arrived at Mhow (Mau) shortly before May 1st, where he established his recess quarters.

As Rivers' series was now approaching the parallel of Kaliánpur and Sironj the

Season 1847-48.

PERSONNEL.

Lieutenant H. Rivers, Bombay Engineers, 2nd

Assistant G. T. Surrey.

Mr. J. Fraser, Sub-Assistant 1st Class.

" T. Sanger, " 2nd Class.

" J. DaCosta, " 2nd Class.

selection of his stations became a matter of more than ordinary difficulty: preparations were already being made for extending the Great Longitudinal Series along this parallel westwards to Karáchi, but the exact latitude in which it would strike the Khánpisura Meridian could not be foreseen. Rivers was told to so select his figures, between the parallels of 24° and 25° , that any one of them if necessary should admit of being adopted in the new Longitudinal Series. On taking the field in October, 1847, Rivers himself commenced the approximate work, which he found a most difficult task: all his triangles had to admit of satisfactory extensions not only to the north, but also to the east and west, and as there were no commanding hills it was often necessary to make a minor triangulation simply to obtain the direction of the points already determined. Under these circumstances Rivers thought it his best plan to undertake himself the approximate work of the new Longitudinal Series and carry it on simultaneously with that of his own chain. He therefore decided to select the stations on the Khánpisura Meridian as far north as the parallel of 24° and to then work along that parallel to Sironj. He had just completed the selection of the stations for the Aramia Polygon, and was about to proceed to Sironj, when he received orders to carry the Khánpisura Series due north to Ajmere (Ajmer) and to leave the longitudinal connection with Sironj to be taken up by another officer. He carried the approximate work up to the parallel of 25° and then commenced the final observations working southwards from the northernmost stations. The Great Longitudinal Series eventually struck the Series under review in the latitude of Aramia, but Rivers' polygon around that station proved unsuitable and another had to be selected. The former, however, together with Rivers' work to the north of it, was included in the Aramia (now the Gurhagarh) Meridional Series, whilst the

side connecting the stations of Bálágara and Búda, which was common to both was made the northern boundary of the Khánpisura Meridional Series. By the end of March, 1848, Rivers had carried the principal work southwards as far as the stations of Dhamnár and Sítaman, and in April he completed the observations at Lohári and Dudhála: at Nigrun, however, though he halted a week, he could not see the Deo Dongri signal, which had been easily visible in November. At Deo Dongri too he was unable to observe Nigrun. At Gurla he met with no better success, though, owing to the shortness of the rays, all the surrounding heliotropes were visible, and at Karsod the Indrawán station could not be made out though large fires were lighted at night, and though the signal had been seen by Mr. Sanger in October. Finding it thus impossible to complete the connection with the side Harnásá-Indrawán of his former season's work, he closed the field season at Karsod on May 5th. He had dismantled and packed the instrument, and it was ready to be moved, when during the night one of the boxes was broken open and the telescope and vertical circle were carried off by thieves. They were found next morning in a ditch 300 yards from camp; they were both uninjured but the eye-piece was missing. Rivers arrived at Mhow where he had established his recess quarters on May 15th.

Rivers re-commenced operations the following winter: the first station visited was

Season 1848-49.

PERSONNEL.

Lieutenant H. Rivers, Bombay Engineers, 2nd
Assistant G. T. Survey.
Mr. J. Fraser, Sub-Assistant 1st Class.
" T. Sanger, " 2nd Class.
" J. DaCosta " 2nd Class.

Indrawán which he reached on November 17th, and from thence he went to Karsod. By the end of the year 1848 he had completed the connection between the northern and southern sections, and the Principal Triangulation of the Khánpisura Meridional Series was finished. Rivers then proceeded towards Neemuch (Nimach) and took up the work of the Gurlágarh Series. The instrument employed by Lieutenant Rivers on the Khánpisura Series was the same 15-inch Theodolite by Dollond that was used on the southern section of the Singi Series.

The Khánpisura Series as left by Rivers, though otherwise double throughout, was

Season 1862-63.

PERSONNEL.

Captain C. T. Haig, R.E., 1st Assistant.
Mr. DaCosta, Assistant.
" J. McGill, Civil 2nd Assistant.
" G. Anding, Sub-Assistant.
" J. E. Donohoe, 3rd Class Sub-Assistant.

weakened near its southern extremity by the existence of two single triangles, viz., Mathuri, Dhaigaon, Jámkhed and Yerúl, Dhaigaon, Jámkhed. In November 1862, Captain Haig, R.E., who was in charge of the Bombay Party and who was about to undertake the Triangulation of the Mangalore Meridional Series, set out from Poona (Puna) with the object of strengthening the single portion of the Khánpisura Series. This object he obtained by the adoption of but one new station that of Áhirmal, which with Mathuri Jámkhed and Rájur gave two new triangles and thus completed a double polygon round Jámkhed and Pophla. Mathuri, the first station visited was reached on November 10th, 1862 and all the observations necessary at the four stations were completed on December 7th. The instrument he used was that known in the Survey Department as Barrow's 24-inch Theodolite No. 2.

In consequence of the great deficiency of observations on certain rays and of the weak character of the heights in general, the re-measurement of all the vertical angles of Rivers' section of the Khánpisura Series was found necessary. In 1882-83, Mr. A. Christie, Surveyor 4th grade, began this revision from the side Bálágara-Búda of the Karáchi Longitudinal Series, and worked southwards as far as Jakálabad and Bábákuvar. In November 1883, Mr. H. E. T. Keelan, Surveyor 3rd grade, was directed to commence at the southern extremity of the Series, Ágargaon and Chineholi, and to work northwards so as to close on Mr. Christie's work of the previous year. Unfortunately at Ágargaon Mr. Keelan was attacked with severe inflammation of the right eye, which obliged him to return to Ahmednagar (Ahmadnagar) for medical aid; he was compelled to take privilege leave till January 15th, and consequently lost two months in the best part of the season. This interruption made it impossible to complete the revision of the heights in the field season of 1883-84, and Mr. Keelan had to resume work on it the following year, when the remeasurement of all the vertical angles was finished.

In 1868-69, Lieutenant W. J. Heaviside, R.E., visited the stations of Deo Dongri and Harnása, and in the following year those of Valvádi and Dhaigaon, and at each of the four observed an astronomical latitude.

Secondary Triangulation.

On the southern part of the Khánpisura Meridional Series, as far north as the River Tápti, an unusually large number of secondary points were fixed by Rivers: the majority of these were intersected pagodas, forts and trees, but there were several secondary stations too, that were visited and observed at: the positions of the towns of Ahmednagar, Dhulia (Dhula) and Aurungabad were determined. The principal station of Ankai of the Singi Series was observed both from Sátmála and Yerúl.

Between the Tápti and Narbada there were no prominent pagodas to observe and no important towns to be fixed and consequently the secondary work was very scanty, consisting of only some ten intersected points in all.

Between the Narbada and the northern terminus of the Series the country was a desolate desert, and but few opportunities offered of executing secondary work: the town of Dhár was the only place of importance that the Series passed over. From the side Harnása-Singárehori a small secondary series was run to the eastwards, which fixed numerous points in the cities of Indore (Indor) and Mhow and which ended at the town of Dewás.

S. G. BURRARD.

April, 1889.

KHANPISURA MERIDIONAL SERIES.

PRINCIPAL TRIANGULATION. ALPHABETICAL LIST OF STATIONS.

Āgargaon	XXIV. (Of the Bombay Longitudinal Series).	Indráwan	XIII.
Āhirmal	XXXII.	Jalálabad	XIX.
Ajnád	XXII.	Jalálkheri	X.
Anakvādi	XXV.	Jámkhed	XXXI.
Ārgaon	XXI.	Karsod	IX.
Bābākuvar	XX.	Kaula-ka-Máta	XI.
Bāligara	XXIV. (Of the Bombay Longitudinal Series).	Lohári	VI.
Bāwangar	XVIII.	Mathuri	XXXIII.
Būda	XXI. (Of the Bombay Longitudinal Series).	Mograba	XIV.
Chincholi	XXIII. (Of the Bombay Longitudinal Series).	Nigrun	III.
Deo Dongri	V.	Pophla	XXVIII.
Dhaigaon	XXXIV.	Rájur	XXIX.
Dhamnár	II.	Sátmála	XXVII.
Dhanora	VII.	Singárechori	XV.
Dhanvār	XXIV.	Sirsála	XXVI.
Dudhála	IV.	Sítamau	I.
Gumánpur	XVI.	Thákri	XVII.
Gurá	VIII.	Valvādi	XXIII.
Harnāsa	XII.	Yerúl	XXX.

KHANPISURA MERIDIONAL SERIES.

PRINCIPAL TRIANGULATION. NUMERICAL LIST OF STATIONS.

XXI (Of the Karachi Longitudinal Series)	Búda.	XVIII	Báwanga
XXIV (Of the Karachi Longitudinal Series)	Bálágara.	XIX	Jalálabad
I	Sítamau.	XX	Bábákuva
II	Dhamnár.	XXI	Árgaor
III	Nigrun.	XXII	Ajúná
IV	Dudhála.	XXIII	Valvádi.
V	Deo Dongri.	XXIV	Dhanvár.
VI	Lohári.	XXV	Anakvádi
VII	Dhanora.	XXVI	Sirsála.
VIII	Gurla.	XXVII	Sátmañla
IX	Karsod.	XXVIII	Pophla.
X	Jalálkheri.	XXIX	Rájur.
XI	Kaula-ka-Máta.	XXX	Yerú
XII	Harnása.	XXXI	Jámkhed.
XIII	Indráwan.	XXXII	Áhirmal
XIV	Mográba.	XXXIII	Mathuri
XV	Singárchori.	XXXIV	Dhaigaon
XVI	Gumánpur.	XXIII (Of the Bombay Longitudinal Series)	Chincholi
XVII	Thíkri.	XXIV (Of the Bombay Longitudinal Series)	Ágaigaon

PRINCIPAL TRIANGULATION. DESCRIPTION OF STATIONS.

[illegible][illegible]

XXIV.—(*Of the Karachi Longitudinal Series*). Bálágara (*Bálagarra*) Hill Station, lat. $24^{\circ} 10'$, long. $75^{\circ} 0'$ —observed at in 1848 and 1850—is situated on the north-eastern of a group of small, isolated hills, about a mile N.E. of the village of Bálágara, and 3 miles W. of the high road from Neemuch to Indore. The hill, on which the station is, rises about 120 feet above the general level of the country, and is a mile in circumference at base. The station is in the lands of the village of Bálágara, pargana Mandsaur, Gwalior territory.

The station as originally built in 1848 consisted of a platform of loose stone masonry, having a mark-stone at the top and another 3.19 feet below engraved on the rock *in situ*. When visited in 1850 in the course of the Karachi Longitudinal Series operations, it does not appear that any alteration in the construction of the station was made. In 1868-69, the mark on the rock was found and the platform, 3 feet in height, consisted of loose stone masonry. In the visit of 1882, the station was found unaltered and in good preservation; the surrounding platform being of stones and earth 18 feet square. The directions and distances of the circumjacent villages are:—Bái E., miles $1\frac{1}{2}$; Dungaloda S. by E., miles $1\frac{1}{2}$; Narona N. by E., miles 2; Khera N.E., mile 1; and Káukri N.W., miles $1\frac{1}{2}$.

I. Sítamau Hill Station, lat. $24^{\circ} 2'$, long. $75^{\circ} 22'$ —observed at in 1848—is situated $1\frac{1}{2}$ miles N.W. of the town of Sítamau, near the centre of a small, flat-topped hill rising some 50 feet above the level of the country, and somewhat conspicuous as being the only wooded hill in the neighbourhood; it is about 20 feet higher than the ridges and spurs with which it is connected. The station is in the lands of the village of Murkhara, Sítamau State, Western Malwa Agency.

The station consisted of a platform of loose stone masonry and contained three marks, the upper two being 5.35 and 8.89 feet respectively above one engraved on the rock at the ground level. It was visited by Lieutenant Heaviside in 1868-69, who stated that "The pillar had apparently not been disturbed." When again visited in 1882, the station was found to consist of an isolated pillar of stone and earth 12.84 feet high, without a mark on its summit, surrounded by a platform of loose stones 18 feet square. A mark-stone was inserted and both the pillar and platform raised by 2.58 feet, making the entire height of the pillar 15.42 feet. The directions and estimated distances of the circumjacent villages are:—Suriakheri N., mile 1; Murkhara W. by S., mile $\frac{3}{4}$; Chikla E.N.E., miles $3\frac{1}{2}$; and Sítamau (town) S.E., miles $1\frac{1}{2}$.

II. Dhamnár Hill Station, lat. $23^{\circ} 53'$, long. $75^{\circ} 12'$ —observed at in 1848—is situated on the highest part of a low, flat-topped, isolated hill rising some 40 feet above the level of the surrounding country. The station is 616 feet N.E. of a high solitary tree, and 5 miles S.E. of the Railway Station of Dalanda: pargana Mandsaur, Gwalior territory.

The station consisted of a solid pillar of masonry which carried a mark at its surface level with the ground and another, fixed in the rock with mortar, 2 feet below. It was visited in season 1868-69 by Mr. J. Wood, who remarks "There is no platform built here, and the lower mark is 2½ feet below the surface of the ground." When again visited in 1882, the station was found to consist of a platform of earth and stones 1 foot high with a mark-stone in its upper surface. The directions and estimated distances of the circumjacent villages are:—Jámúnia E., miles $1\frac{1}{2}$; Atunia E.N.E., miles $1\frac{1}{2}$; and Yusufkhara W., mile $\frac{3}{4}$.

III. Nigrun Station, lat. $23^{\circ} 46'$, long. $75^{\circ} 27'$ —observed at in 1848—is situated on the rising ground about $1\frac{1}{2}$ miles S.E. of the village from which it is named, and $3\frac{1}{2}$ miles N. of the town and post office of Tál: The station is in the lands of the village of Nigrun, pargana Tál, Jaora State, Western Malwa Agency.

The station consists of a solid pillar of masonry, about 5 feet in height, having marks at top and bottom 5.15 feet apart. The platform is built of loose stone masonry and carried to a height of 5.27 feet above the top of the solid pillar, the whole structure being 10.27 feet high. When visited in 1882, the platform and a mark-stone in its upper surface were found in good preservation. The directions and distances of the circumjacent villages are:—Pipalia N.E., miles 4; Naráni E.N.E., miles $5\frac{1}{2}$; Bagunia E. by S., miles $3\frac{1}{2}$; and Kachalia S.E., miles 4.

IV. Dudhála Hill Station, lat. $23^{\circ} 51'$, long. $75^{\circ} 49'$ —observed at in 1848—is situated about 30 feet from the southern extremity of a laterite hill rising 100 feet above the level of the country. The top of the hill is flat, running off into wide spurs to N.W. and N.E. of the station, the southern face being rather precipitous. The town of Barand lies $4\frac{1}{2}$ miles to S. by E. of the station. The station is in the lands of the village of Dudhála, pargana Jhálra Pátan, Jhallowar Stato.

The station consists of a platform of loose stone masonry containing two marks, one at the surface 5.23 feet above the other. It was visited by Lieutenant Heaviside in season 1868-69, who remarks "The pillar had apparently not been disturbed." When again visited in 1882, the station and its upper mark-stone were found in good preservation. The directions and distances of the circumjacent villages are:—Atipura N.E. by E., miles $1\frac{1}{2}$; Kasankot E.S.E., miles $1\frac{1}{2}$; Khandwás S., mile 1; and Ratanpur W.S.W., mile $\frac{3}{4}$.

V. Deo Dongri Hill Station, lat. $23^{\circ} 27'$, long. $75^{\circ} 35'$ —observed at in 1848—is at the junction of three walls on the southern side of the roof (11½ feet above ground) of the large temple on a low hill at the northern extremity of the village of Deo Dongri. The village is near the centre of a small, isolated hill, about

800 feet in length at top, and rising about 70 feet above the general level of the surrounding country: pargana Unel, Gwalior territory.

The station consists of a solid pillar of masonry, about 2 feet high, containing a mark in the surface 2.92 feet above one imbedded in the masonry of the wall. The mark is 1.33 feet from the E. side and 1.25 feet from the S. side of the pillar. In March 1869 a protecting pillar of stone masonry, 2 feet square, was built over the mark-stone. When again visited in 1882, the station was found marked by a square pillar of stone masonry rising 2.7 feet above the stone roof of the temple. The azimuths and perambulated distances of the circumjacent villages are:—Matra 326°, miles 1.2; Mo 356°, miles 1.6; Rattr 48°, mile 0.8; Medpur (the largest and most conspicuous temple) 250°, miles 7½ by estimation.

VI. Lohári Hill Station, lat. 23° 35', long. 75° 8'—observed at in 1848—is situated on a low, flat-topped hill rising about 70 feet above the plain, appertaining to the villages of Lohári, Nagdi and Wairala. It lies about a mile E. of the railway line, and of the high road from Jaora to Rutlam. The station is in the lands of the village of Lohári, Jaora State, Western Malwa Agency.

The station consisted of a platform of loose stones, about 6 feet in height, enclosing a central, solid pillar of masonry which had a mark in its surface and another 5.21 feet below. It was visited in 1869 by Lieutenant Heavyside, when no mark-stones were found and a heap of loose stones alone denoted the site of the station. When again visited in 1883, the station was found to consist of a platform of earth and stones 5½ feet high with a mark-stone in its upper surface, but as this proved too low for observations to Deo Dongri Station, the platform was raised with an isolated pillar of earth and stones in the centre to a height of 13.4 feet above the ground level. The estimated directions and distances of the following villages are:—Lohári N., miles 1½; Waraila S., mile 1; Sadakheri E.S.E., miles 2; and Nagdi E.N.E., miles 1½.

VII. Dhanora Hill Station, lat. 23° 17', long. 75° 18'—observed at in 1848—is situated on a table-land rising about 80 to 100 feet above the surrounding country, 1 mile N. of Láptia village, and 6 miles E. of the Railway Station of Naugauvan. It is in the lands of the village of Dhanora, Sailána State, Western Malwa Agency.

The station consisted of a platform of loose stone masonry, 12 feet in height, which had a mark-stone at top and another at the ground level. When visited in 1883, no mark-stones were found, on removing the central portion of the heap of stones an excavation, a few inches deep, like the foundation of a pillar, was met with at the ground level: in this a mark-stone was fixed and the platform rebuilt to a height of 9.3 feet, and over which an isolated pillar of earth and stones 1.4 feet high was built, carrying a mark-stone in its upper surface; but this height proving insufficient the pillar was raised by 7.3 feet during the same season. The estimated directions and distances of the following villages are:—Sandla S.W. by W., mile 1; Bamori N. by W., miles 2; and Kamer E., miles 2.

VIII. Gurla Hill Station, lat. 23° 18', long. 75° 36'—observed at in 1848—is situated on a northern spur of a low, flat-topped range of hills, which stretches in a S.S.E. direction from the station for some 4 or 5 miles, and is about 60 feet above the level of the country to the west. The station is in the lands of the village of Gurla, pargana Unel, Gwalior territory.

The station consists of a platform of loose stone masonry containing two marks, the upper 7.23 feet above the lower. It was visited by Lieutenant Heavyside in season 1868-69, who stated that "The mark-stone was not uncovered, but the pillar was apparently undisturbed". When again visited in 1883, the station was found to consist of a platform of earth and stones 6.7 feet above the ground level having a mark-stone in its upper surface. The directions and estimated distances of the circumjacent villages are:—Unel N. by E., miles 3; Gurla W., mile 1; Nawáda N.W., miles 3½; and Norela S.S.E., miles 4.

IX. Karsod Hill Station, lat. 23° 7', long. 75° 28'—observed at in 1848 and 1862—is situated on a small hill about 5½ miles N.E. of the town and railway station of Barnagar. It is towards the S. extremity of the hill, and 119 (ft.?) 8 (in. ?) S. of the southern wall of a temple. It is in the lands of the village of Chota Karsod, pargana Barnagar, Gwalior territory.

The station consists of a platform (most probably constructed in a manner similar to those at the adjacent stations) and contains two marks, the upper 4.27 feet above the lower. When visited in 1862, in the course of the Guzerat Longitudinal Series operations, the station was found to be about 5 feet in height. When again visited in 1883, the station was found in good order and to consist of a platform of earth and stones enclosing a perforated pillar of masonry 5 feet high with two mark-stones, one in its upper surface and the other below; an aperture on the S. side gives access to the lower mark-stone. The estimated directions and distances of the circumjacent villages are:—Rasulabad S., mile ½; Chota Karsod N.E. by N., miles 1½; and Palwás N., miles 2¾.

X. Jakálkheri Hill Station, lat. 23° 11', long. 75° 45'—observed at in 1848—is situated on a detached hill about a mile S. of a table-land. The station is on the northern of two eminences rising 20 feet above the hill top, and some 100 feet above the level of the country and lies 3½ miles west of the railway station near the town of Ujjain: pargana and district Ujjain, Gwalior territory.

The station consists of a platform of loose stones about 10 feet square and 6 feet high, the central portion from 2 to 3 feet square is of solid masonry in which three mark-stones are inserted, the two upper being 2.75 and 6.08 feet respectively above

one imbedded in the foundation, the second mark-stone is about the ground level. In 1869 Lieutenant Heavyside found the upper mark-stone in position. When visited in 1883, the station was found to consist of a platform of earth and stones 16 feet square and 3·8 feet high with a mark-stone in its upper surface. The directions and estimated distances of the circumjacent villages are:—Jalálkheri W.N.W., mile 1; Mendpura E.N.E., miles $1\frac{1}{2}$; and Chandukheri S.W. by S., miles $1\frac{1}{2}$.

XI. Kaula-ka-Máta Hill Station, lat. $23^{\circ} 8'$, long. $75^{\circ} 13'$ —observed at in 1818—is on an isolated and symmetrically shaped hill rising about 500 feet above the plain. The station is at the N.E. corner of the flat roof of the porch and E. of the spire of the large templo of Kaula-ka-Máta from which the hill derives its name. The station is in the lands of the village of Barmaval, Sailána State, Western Malwa Agency.

The station is denoted by two marks, the upper 0·75 of a foot above the lower. It was visited in 1869, when "the mark was found in good preservation". When again visited in 1883, the station was found to consist of a square pillar of masonry 6 inches high with a mark-stone in its upper surface, the height of which above the top of the hill is $18\frac{1}{2}$ feet. The directions and estimated distances of the circumjacent villages are:—Amleti N.E., mile 1; Barmaval W., miles 3; and Lochitara (on the high road to Mhow) E., miles 2.

Another principal station, about 20 yards S. of the temple, was established in 1862 in the course of the operations of the Guzerat Longitudinal Series, in which Series its full description will be found under the name of Station "I. Kaula-ka-Máta".

XII. Harnása Tower Station, lat. $22^{\circ} 47'$, long. $75^{\circ} 36'$ —observed at in 1847 and 1848—is situated on the highest part of the country, the watershed of the Gambhír and Chambál rivers, and 4 miles S. by E. of the town of Depálpur on the road from Neemuch to Indore: pargana Depálpur, Holkar's territory.

The station as originally built in 1846 consisted of a solid pillar of masonry sunk to a depth of about 9 feet, having its upper surface flush with the ground level. It contained two marks, one at the surface about 9 feet above the other. Over the pillar a loose stone platform was constructed with a mark in its upper surface. The height of the platform above the top of the pillar appears to have been originally 7·35 feet; but this not proving sufficient it was increased to 10·31 feet in April 1847. The station was revisited in 1869 by Mr. J. Wood, Assistant Surveyor, who removed the pile of stones and found a mark-stone about 3 feet below the ground level. He built up the pillar to the ground level and placed a mark-stone there. At this level astronomical observations for latitude were taken in 1869-70. Immediately afterwards a perforated masonry pillar was built over the mark-stone at the ground level and carried up to a height of 10·31 feet, the height of the station as given in the original description. The pillar is surrounded by a platform, and an arched passage runs nearly north and south through the platform and pillar giving access to the mark-stone. When again visited in 1883, the upper 4 feet of the pillar was found pulled down, it was rebuilt to a height of 10·2 feet above the ground level mark. The directions and distances of the circumjacent villages are:—Jaloda N.E. by N., miles $1\frac{1}{2}$; Harnása S. by E., mile $\frac{3}{4}$; Suklundi S. by W., miles $1\frac{1}{2}$; Bāsoda W. by N., mile $\frac{3}{4}$; and Girora N. by W., miles 2.

XIII. Indráwan Tower Station, lat. $22^{\circ} 49'$, long. $75^{\circ} 13'$ —observed at in 1847, 1848 and 1862—is situated on rising ground, about 1 mile N.W. of the village from which the station obtains its name, and 8 miles N.N.E. of Desi. The station is in the lands of the village of Barawál, pargana Badnáwar, Dhár State, Bhopáwar Agency.

The station as originally built in April 1847 consisted of a solid pillar of masonry sunk to a depth of 6·8 feet, containing two marks, the upper in the surface of the pillar being at the ground level; over this a platform of loose stones, 7·46 feet in height, with a mark at the top was constructed. In November-1848 an addition of 2·17 feet was made to the height of the platform. It was again visited in February 1862 in the course of the operations of the Guzerat Longitudinal Series: in the records of that Series it is simply stated that it is built 4·75 feet high. In 1869 the loose stone platform was removed; and over the original mark at the ground level, a perforated and isolated pillar of masonry 7·46 feet in height and $3\frac{1}{2}$ feet in diameter was built with a mark-stone in its upper surface, and surrounded by a platform of earth and stones of the same height as the pillar. An arched passage from E. to W. gives access to the ground level mark. It thus appears that the station as last constructed is 2·17 feet lower than that of November 1848. When again visited in 1883, the pillar and its upper mark-stone were found in good order. The directions and distances of the circumjacent villages are:—Borjhiri W., mile 1; Burwai E., miles $2\frac{1}{2}$; and Gundikheri S.E., miles $1\frac{1}{2}$.

XIV. Mograba Hill Station, lat. $22^{\circ} 23'$, long. $75^{\circ} 22'$ —observed at in 1847—is situated on the summit of the highest, flat-topped hill $5\frac{1}{2}$ miles to N.W. of the old, ruined city of Mándó or Mándogarh: the small Rheel village of Mograba lies to the N.E. at about $\frac{3}{4}$ of a mile in direct distance from the station: pargana Nálchha, Dhár State, Bhopáwar Agency.

The station consists of a platform having its upper surface flush with the ground, which contains two marks, the lower, on a large stone set in the muram (a kind of gravel), is 0·40 of a foot below the one in the surface of the platform. It was visited in 1869, when the upper mark-stone was found firmly imbedded. When again visited in 1883, the station was found in good order and covered over by a protecting masonry pillar 3 feet, 8 inches high, but as the upper diameter was too small to admit of the theodolite, the upper 6 inches of the pillar were removed. The directions and estimated distances of the circumjacent villages are:—Talwára N. by E., miles 8; Múrkhal S., miles $2\frac{1}{2}$; and Maulanda S.S.W., miles 3.

XV. Singárehori Hill Station, lat. $22^{\circ} 25'$, long. $75^{\circ} 43'$ —observed at in 1847—is situated on the highest part of a range of hills so called, lying about $3\frac{1}{2}$ miles E.S.E. of the village of Mánpur on the high road from

Bombay to Agra, and $11\frac{3}{4}$ miles S.S.W. of the cantonment of Mhow. The hill is about 1000 feet in height: Mánpur State, Bhopáwar Agency.

The station was denoted by two marks, the upper 1·79 feet above the lower. When visited in 1883, a masonry pillar 2 feet in diameter and 3 feet above ground level surrounded by earthwork about 2 feet high was found; there being no mark-stone on the pillar its upper portion was removed and a mark-stone embedded in its centre 1·75 feet above the ground level. The directions and estimated distances of the following villages are:—Bargaon N.W. by N., miles $1\frac{1}{2}$; Mograpura E.S.E., miles $1\frac{1}{2}$; and Nayapura E. by N., miles $1\frac{1}{2}$.

XVI. Gumánpur Tower Station, lat. $22^{\circ} 35'$, long. $74^{\circ} 55'$ —observed at in 1847—is situated on rising ground about $\frac{3}{4}$ of a mile S. of the village of that name and about 200 yards N. of the edge of the Ghát, and $5\frac{1}{2}$ miles N. by E. of the large village of Tanda. It is in the lands of the village of Gumánpur, Amjhera State, Bhopáwar Agency.

The station of 1847 consisted of a loose stone platform with a mark-stone at top 7·48 feet above one let into masonry at the ground level. In 1869 the platform was removed and a perforated and isolated pillar of masonry, 7·48 feet in height, built above the original mark at the ground level, and surrounded by a platform of stones: a passage from N. to S. gives access to the ground level mark. When again visited in 1883, the station was found to consist of a pillar of masonry 5·3 feet high and 3 feet in diameter with a mark-stone in its upper surface, and surrounded by a platform of loose stones. The directions and distances of the circumjacent villages are:—Ratanpura N.E. by N., miles 2; Ringuod E.N.E., miles 4; Nawapura E. by S., miles $1\frac{1}{2}$; and Urai W.N.W., mile $\frac{1}{4}$.

XVII. Thikri Hill Station, lat. $22^{\circ} 1'$, long. $75^{\circ} 27'$ —observed at in 1847—is situated on a knoll, 40 yards long, 20 yards wide, and 20 feet high, at the S. extremity of a table-land which rises about 300 feet above the general level of the surrounding country. It is about $3\frac{1}{2}$ miles S. by E. of the Police Station of Thikri on the high road from Bombay to Agra: pargana Dharampuri, Dhár State, Bhopáwar Agency.

The station consists of a platform of loose stones enclosing a solid circular pillar of masonry which contains two marks, one at the surface 1·25 feet above the other which is engraved on the rock. When visited in 1869, the upper mark-stone was found firmly fixed; it was again visited in 1883, when the station was found protected by a rectangular capping pillar $3\frac{1}{2}$ feet high built over the circular pillar level with the surface of the knoll. The directions and distances of the circumjacent villages are:—Rarkot S. by E., mile 1; Rupkhera S.W. by W., miles $1\frac{1}{2}$; Khurrampur (on the high road) W., miles $4\frac{1}{2}$; and Nader N.N.E., miles 2.

XVIII. Báwangaz Hill Station, lat. $21^{\circ} 59'$, long. $74^{\circ} 54'$ —observed at in 1847—is on the terraced roof of a temple which is built of fine slabs of granite, on the highest part—a peak—of a remarkable hill called Báwangaz, about 5 miles S. of the Nerbudda river. The temple is dedicated to a god whose colossal figure is cut on the rock in bold relief, about 600 feet below, on the southern face or scarp of the hill. The station is almost in the centre of the flat portion of the roof E. of the dome, 13·42 feet from the nearest part of the circumference of the dome, 11·42 feet from the outside of the N. wall, and 12·75 feet from the outside of the S. wall; the roof of the temple is 10 feet above the ground. The station is in the lands of the village of Barwáni, Barwáni State, Bhopáwar Agency.

The station consists of a solid circular pillar of masonry which contains two marks, the upper 0·44 of a foot above the one engraved on a slab of granite of the roof. When visited in 1869 and 1883 the station and its upper mark-stone were found in good preservation. The directions and distances of the circumjacent places are:—Barwáni town N.E., miles $4\frac{1}{2}$; Chikulda town N. by E., miles 7; Bhomin village N., miles $2\frac{1}{2}$; Mangarpati and Kachkor (on the Goi stream) W.N.W., miles $3\frac{1}{2}$; and Wadgaon E.N.E., miles 4.

XIX. Jakálabad Hill Station, lat. $21^{\circ} 41'$, long. $75^{\circ} 27'$ —observed at in 1847—is situated on the highest peak of the same range of hills as that on which the old, ruined fort of Bijagarh stands and from which it lies $3\frac{1}{2}$ miles in a direction E. by S. The station is in the lands of the village of Náráyangarh, pargana Khargon, Holkar's territory.

The station consists of a platform of loose stone masonry containing two marks, one at the surface and the other 0·44 of a foot below. It was visited by Lieutenant Heaviside in 1869, when the upper mark-stone was found in position, and about $2\frac{1}{2}$ feet above the ground level. In 1883 and 1884, the station was found in good preservation and the upper mark-stone in position. The directions and distances of the circumjacent villages are:—Sángvi N.N.W., miles 4; Bhadwáli N., miles $4\frac{1}{2}$; Sirwil Chanki (police station) and temple S.E. by S., miles $4\frac{1}{2}$; and Dhaura S.W. by S., miles $2\frac{1}{2}$.

XX. Bábákuvar (*Bábákuwar*) Hill Station, lat. $21^{\circ} 36'$, long. $74^{\circ} 57'$ —observed at in 1847—is situated on the main ridge of the Sápura hills, about $9\frac{1}{2}$ miles N.W. by W. of the Dák Bungalow at Palásner on the high road from Bombay to Agra, and 550 feet E. of an idol at the W. extremity of the hill. The station is in the lands of the village of Boradi, taluka Shirpur, district Khándosh.

The station consists of a platform of loose stone masonry containing two marks, one at the surface and the other 1·67 feet

below. When visited in 1883 and 1884, the station was found in good preservation and the upper mark-stone in position. The height of the platform is about 1 foot from the ground level. The directions and distances of the circumjacent villages are:—Chaparkhera N.E., miles $4\frac{1}{2}$; Rājmalī E., miles $4\frac{1}{2}$; Vakvar S.E. by E., miles 5; and Khera S.E. by S., miles 6 $\frac{1}{2}$.

XXI. Ārgaon Hill Station, lat. $21^{\circ} 18'$, long. $75^{\circ} 34'$ —observed at in 1847—is situated on a high peak of the Sātpuda range, rising some 2500 feet above the plains of Khāndesh. The peak which is known by the name of Mondhīmal, is about $1\frac{1}{2}$ miles W. of the ruins of Gauligārh, and $5\frac{1}{2}$ miles N.N.W. of Ārgaon village. A small conical peak is 50 yards to S.E. The station is in the lands of the village of Bhadgaon, taluka Chopda, district Khāndesh.

The station consists of a platform of loose stone masonry containing two marks, one at the surface and the other 0.81 of a foot below engraved on the rock. In 1869 Lieutenant Heaviside found the upper mark-stone in position and nearly on the same level as the highest part of the peak. When again visited in 1884, the upper mark-stone and platform were found in good preservation. The azimuths and estimated distances of the circumjacent villages are:—Dhānora 4° , miles $6\frac{1}{2}$; Adāvad 42° , miles 8; Birgaon 6° , miles 6; and Mahorad 356° , miles $4\frac{1}{2}$.

XXII. Ajnād Hill Station, lat. $21^{\circ} 19'$ long. $75^{\circ} 5'$ —observed at in 1847—is situated on a long, high ridge running nearly in a direction W.N.W. and E.S.E. and parallel to road to south from Shirpur to Tānda on the Aner river, about 2 miles N. of Ajnād village. The station is in the lands of the village of Ajnād, taluka Shirpur, district Khāndesh.

The station consists of a platform of loose stone masonry containing two marks, one at the surface and the other 0.67 of a foot below engraved on the rock. When visited in 1884, the upper mark-stone and platform were found in good preservation. The azimuths and distances of the circumjacent villages are:—Bābla 310° , miles $2\frac{1}{2}$; Tūrlī 321° , miles $3\frac{1}{2}$; and Bhātūr 28° , miles 3.

XXIII. Valvādi (*Walodri*) Hill Station, lat. $20^{\circ} 44'$, long. $75^{\circ} 14'$ —observed at in 1846—is situated near the N.W. extremity of a group or range of low hills about 90 feet in height. The station is about 20 yards from the W. edge of a flat, rocky hill, whose summit is 150 yards long and 30 yards wide. The station is in the lands of the village of Valvādi, taluka Pāchora, district Khāndesh.

The station consisted of a platform of loose stone masonry having a mark at its surface and another 2.00 feet below it engraved on the rock *in situ*. A heap of stones, apparently the station platform of some former survey, was found here: the centre of this heap was made the site. It was visited in 1870 by Lieutenant Heaviside, when the upper mark-stone was not found, the platform was partly dug up and a solid circular pillar of masonry was built up from the level of the lower mark to a height of 2 feet and a mark-stone inserted in its upper surface. When again visited in 1884, the station was found protected by a rectangular pillar 2.8 feet high built over the circular masonry pillar. The directions and estimated distances of the circumjacent villages are:—Māndla S.W. by S., miles 4; Titi W. by N., miles $2\frac{1}{2}$; Chorvār N., miles 2; and Valvādi S.E. by S., miles 1 $\frac{1}{2}$.

XXIV. Dhanvār (*Dhanvār*) Hill Station, lat. $20^{\circ} 53'$, long. $75^{\circ} 38'$ —observed at in 1846—is on the southern of a group of low, flat-topped hills which rises some 70 feet above the low range from which it springs, and is some 200 feet above the level of the country. The top of the hill is pear shaped, the station being about 20 yards from the narrow end and 60 yards from the broader. The station is in the lands of the village of Dhanvār, taluka Jalgaon, district Khāndesh.

The station consists of a platform having the usual mark at its surface and another 0.98 of a foot below. In 1869 the upper mark-stone was in position and about 2 feet above the hill top. When visited in 1884, the upper mark-stone was found in the centre and upper surface of a platform 2 feet high. The azimuths and estimated distances of the circumjacent villages are:—Dhānora 186° , miles 2; Karmar 300° , miles 2; Dehori 240° miles $1\frac{1}{2}$; and Palāskhera 350° , miles 4.

XXV. Anakvādi (*Anakvādi*) Hill Station (locally known as Silla Dongar) lat. $20^{\circ} 47'$, long. $74^{\circ} 44'$ —observed at in 1846 and 1847—is on the summit of a conical hill about 1000 feet above the plain and some 700 feet above the lower range from which it rises with precipitous sides. The station mark is 20 feet S.E. of a small heap of stones forming a shrine: it is in the lands of Anakvādi village, taluka Dhulia, district Khāndesh.

The station consists of a platform having two marks, one in its upper surface and the other 2.5 feet below it. It was visited by Lieutenant Heaviside in season 1868-69, who stated that "A mark-stone is in position and on a level with the surface of the ground." When again visited in 1881, the upper mark-stone was found protruding 6 inches above the surface of the three large stones on which the theodolite stand rested; this upper mark is 3.2 feet above and in the normal of the lower one engraved on the rock *in situ*. The directions and estimated distances of the circumjacent villages are:—Anakvādi S. by W., miles $1\frac{1}{2}$; Sargāon N.W. by W., miles 3; Dhulia N.E. by N., miles 10; Lāling (fort) E.N.E., miles 4; and Arvi (Dāk Bungalow) S.S.E., miles $2\frac{1}{2}$.

XXVI. Sīrsālā Hill Station, also called Shekh Mārū Pīr, lat. $20^{\circ} 30'$, long. $75^{\circ} 34'$ —observed at in 1846—is on a hill about 200 feet high close to the N. edge of the table-land which rises gradually from the Godāvāri

river and here terminates in a northerly direction by a descent of some 1200 feet into the plains of Khândesh. About $1\frac{1}{2}$ miles W. of the station and built in a gorge above a precipice of the table-land, is an uninhabited fort which contains a temple dedicated to Mahádev. The station is in the lands of the village of Sirsála, taluka Nánded, district Aurangabad.

The station consists of a platform of stones having a mark at its surface and another 0·83 of a foot below engraved on the rock *in situ*. In 1869 Lieutenant Heavyside found the upper mark-stone in position and about 2 feet above the hill top. When again visited in 1881, the platform and lower mark were found in good preservation, the upper mark-stone was replaced (having been picked up from the hill side) at 0·83 of a foot above and in the normal of the lower mark. The azimuths and estimated distances of the circumjacent villages are:—Kelgaon 37° , miles $2\frac{1}{2}$; Borkhera 178° , miles 3; Sirsála 313° , miles $1\frac{1}{2}$; Shekhpur 345° , miles 3; and Pipalgaon 354° , miles 8.

XXVII. Sútmañla Hill Station, lat. $20^\circ 20'$, long. $75^\circ 10'$ —observed at in 1846—is on a hill so called, about 2 miles W. of a chauki (police station) on the Ganthála Ghát, and 5 miles N. of the taluk town of Kanad. The line of Gháts extends about 15 miles further west, and its descent to the plains to north is considerable. The station is in the lands of the village of Ganthála, taluka Kanad, district Aurangabad.

The station originally consisted of a platform about 5 feet high, having a mark-stone at its surface and another 5·00 feet below. In season 1846-47, the platform was raised 4·04 feet. When visited in 1884, the platform was found 9 feet high, built of loose boulders, having a mark-stone on its summit not firmly fixed, as the structure was too shaky for observation the upper portion was removed till the mark-stone said to be 5 feet above the ground level was disclosed wedged in between three large stones used for the theodolite stand to rest on. As this part was firm and adapted for observations, the platform was built up to the level of this mark. No masonry pillar appears to have been built here, nor could one be erected now as both water and labour were difficult to obtain. The azimuths and estimated distances of the following places are:—Bánni 345° , miles $5\frac{1}{2}$; and Heradgaon 350° , miles $4\frac{1}{2}$.

XXVIII. Pophla Hill Station, lat. $20^\circ 2'$, long. $75^\circ 31'$ —observed at in 1846—is on the highest part of a hill, $1\frac{1}{2}$ miles N. E. of that village, a vadi (garden) of which is close below the station. It is 7·25 feet (20° N. of W.) from the centre of a tomb. The station is in the lands of the village of Pophla, taluka Phulamri, district Aurangabad.

The station consisted of a platform having a mark-stone at its surface and another 1·08 feet below. When visited in 1884, no mark-stones were found, the platform, with an excavation in the centre, remained to mark the site of the station. A mark-stone was built into the centre of the platform—7·25 feet from, 20° N. of W. of the centre of the tomb (above mentioned), and on a level with the upper surface of the platform which is 1·25 feet above the surface of the hill. The azimuths and estimated distances of the following villages are:—Kámkhera 3° , miles 3; Modhai 66° , miles 2; Chincholi 91° , miles $1\frac{1}{2}$; Bámaugaon 212° , miles 2; and Vághul 266° , miles 2.

XXIX. Rájur Hill Station, lat. $20^\circ 4'$, long. $75^\circ 54'$ —observed at in 1846 and 1862—is on a small conical hill about 200 yards W. of the village, and N. W. of a large temple, about 50 feet high, built of most elaborately carved stone, having two tiers of pillars above its base which is $13\frac{1}{2}$ feet high. The horizontal distance of the station to the N. W. pillar of the first tier is 68·8 feet, and that to the N. W. corner of the base, 66 feet. The station is in the lands of the village of Rájur, taluka Jafarabad, district Aurangabad.

The station first consisted of a platform 14 feet high with two mark-stones, a large one, about 3 feet square and 2 feet thick, at the top and another 13·75 feet below about the ground level. It was visited in 1862 and then rebuilt to a height of about 20 feet. When again visited in 1884, the surrounding platform was found to have fallen away leaving the upper 12 feet of the circular masonry pillar exposed, this was rebuilt with stones. The upper mark-stone was in position, 20·25 feet above and in the normal of the mark at the ground level. The azimuths and estimated distances of the following villages are:—Channagaon 32° , miles 2; Táplichandai 112° , miles $1\frac{1}{2}$; Kámkhera 212° , miles $1\frac{1}{2}$; Lon 283° , miles 2; and Tápon 327° , miles $1\frac{1}{2}$.

XXX. Yerál Hill Station, lat. $19^\circ 59'$, long. $75^\circ 12'$ —observed at in 1846—is on the high table-land, about $2\frac{1}{2}$ miles S. of the celebrated cave temples. The station is 418 feet W. of a conspicuous Bar tree, 1949 feet E.N.E. of an old station of the Bombay Trigonometrical Survey, and 60 feet from the southern and 525 feet from the northern edge of the hill. It is in the lands of the village of Sáríbhánjan, taluka Rōza, district Aurangabad.

The station consisted of a platform with two mark-stones, one at the ground level and the other 2·13 feet below. In 1870 the upper mark-stone was not found, but the lower one was probably in position. A pile of stones about 3 feet in height was then erected over the platform. When again visited in 1881, no mark-stones were found and only a heap of boulders marking the site of the platform. The platform was rebuilt to a height of 1 foot, taking the centre of the heap of boulders as a guide and a mark was placed in the centre and on a level with its upper surface. The position of this mark was tested by observing the horizontal angles between the four adjacent stations with a 14-inch theodolite which showed no appreciable difference with the angles measured in 1846. The estimated directions and distances of the following places are:—Daulatabad (minaret) S.E., miles 43; Chumar Tekri (centre of hill fort) S.E. by S., miles 8 or 9; and Daulatabad (Rōza, mausoleum) N.E., miles $3\frac{1}{2}$.

XXXI. Jámkhed Hill Station, lat. $19^{\circ} 41'$, long. $75^{\circ} 42'$ —observed at in 1845, 1846 and 1862—is situated on a square, flat-topped knoll rising about 20 feet above the surface of the irregular plateau-like range trending east and west and terminating about 150 feet to the east of the station in an abrupt fall to the plain below, and lies about 2 miles N. of the town of Jámkhed. The station is in the lands of the village of Rhaigarh, taluka Ambad, district Aurangabad.

The station of 1846 consisted of a platform containing two mark-stones, the lower 1.63 feet below the one at the surface of the ground. When visited in 1862, the mark at the ground level of the old station was found and over this a circular perforated and isolated pillar of masonry $3\frac{1}{2}$ feet in diameter was built, carrying a mark in its upper surface 3.00 feet above the one at the ground level, access to which was obtained by a passage constructed for the purpose. When again visited in 1884, the circular masonry pillar and the rectangular aperture for plumbing over the mark at the ground level were found in good preservation, but no upper mark. The height of the upper surface of the pillar above the one at the ground level is 3 feet. The azimuths and estimated distances of the following villages are:—Jámkhed 4° , miles $2\frac{1}{2}$; Rhaigarh 180° , miles 2; Kingaon 271° , miles 2; and Vitalvadi 336° , miles $1\frac{1}{2}$.

XXXII. Ahirmal Hill Station, lat. $19^{\circ} 33'$, long. $76^{\circ} 7'$ —observed at in 1862—is situated on an isolated hill of that name, about $1\frac{1}{2}$ miles N.E. by N. of the village of Dháképhal. The platform of the station is built contiguous to a Muhammadan mosque. It is in the lands of the village of Dháképhal, taluka Ambad, district Aurangabad.

The station consists of a platform of loose rubble, enclosing a central, isolated and perforated pillar of masonry 5 feet in height. Access to the lower mark is obtained through a passage specially constructed for the purpose. When visited in 1884, the circular masonry pillar and the mark in its upper surface were found in good preservation. The azimuths and estimated distances of the circumjacent villages are:—Dhargaoon 5° , miles $3\frac{1}{2}$; Hadgaon 115° , miles $1\frac{1}{2}$; Jaula 169° , mile 1; and Jhigaon 260° , miles $2\frac{1}{2}$.

XXXIII. Mathuri Hill Station, lat. $19^{\circ} 11'$, long. $75^{\circ} 32'$ —observed at in 1845 and 1862—is on the N.W. corner of the temple built on the conical hill $1\frac{1}{2}$ miles E. of Mathuri village, over the junction of the walls of the smaller shrine: it is in the lands of the village of Mathuri, taluka Bid, Nizam's territory.

The station of 1845 contained two marks, the one imbedded in the stone masonry of the wall 1.38 feet below the upper which was fixed at the level of the roof which is 10 feet above the ground. When visited in 1862, the mark on a level with roof of the temple was found in position, over which a solid, circular pillar of masonry was built carrying a mark in its upper surface 1.17 feet above the one level with the roof. When again visited in 1884, the upper portion of the circular masonry pillar was found broken and the upper mark-stone removed; but the mark of 1845 on a level with the roof of the temple was found in position. The pillar was rebuilt to a height of 1.17 feet above the roof of the temple in its upper surface. The directions and distances of the circumjacent villages are:—Bhorgaon S. by W., miles $4\frac{1}{2}$; Mirsangvi W.S.W., miles $4\frac{1}{2}$; Titurvani E. by S., miles $1\frac{1}{2}$; and Malegaon W. by N., miles $3\frac{1}{2}$.

XXXIV. Dhaigaon Station, lat. $19^{\circ} 31'$, long. $75^{\circ} 15'$ —observed at in 1845—is situated on the high ground, about $1\frac{1}{2}$ miles S. of the Vagji stream which joins the Godáviri river at $2\frac{1}{2}$ miles to N.E. of the station. It is in the lands of the village of Dhaigaon, taluka Nevása, district Ahmednagar.

"The soil was excavated to a depth of about 4.75 feet and $2\frac{1}{2}$ feet below the muram (a kind of gravel), a large stone, about 4 feet long and 1 foot square, with the usual mark on its upper surface, was imbedded in the muram. From the surface of the muram a pillar of stone masonry about 4 feet in diameter has been built up and raised about 2 feet above the ground. A platform of loose stones has been built around the pillar and a stone with the usual mark placed at its surface at the height of $20\frac{1}{2}$ (?) above the mark on the large stone". When visited in 1884, the pillar and the mark were found in good preservation. The azimuths and perambulated distances of the following are:—Dhaigaon (large pipal tree S. of village) 76° , miles 1.95; Gheori (temple) 306° , miles 2.06; and Devlana (temple on right bank of the Godáviri) 219° , miles 2.29.

XXIII. (Of the Bombay Longitudinal Series). Chincholi Hill Station, lat. $18^{\circ} 55'$, long. $75^{\circ} 19'$ —observed at in 1845—is situated on a short narrow ridge about 300 feet long, trending east and west nearly, and 30 feet higher than the level of the surrounding plateau. The station is on the western end of the ridge while a large bar tree marks the eastern extremity. The large village of Ashti on the high road from Ahmednagar to Jámkhed lies about 10 miles to S.W. by S. and that of Amalner 4 miles to E. by N. of the station. It is in the lands of the village of Chincholi, taluka Ashti, Nizam's territory.

The station consists of a solid platform and contains two marks, the one at its surface is 0.83 of a foot above one fixed in 1834. When visited in 1884, the station was found to consist of a circular masonry pillar 2.8 feet in diameter at top with a mark-stone embedded flush with its upper surface; the pillar is surrounded by a large irregular shaped platform of loose boulders from which it is not isolated. Judging from the appearance the pillar does not appear to be very ancient. The height of the upper mark above the ground level is 10.6 feet. The azimuths and distances of the circumjacent villages are:—Chikhli 13° , miles 2; Chincholi 34° , mile $\frac{1}{2}$; and Gangarvadi 67° , miles $2\frac{1}{2}$.

XXIV. (*Of the Bombay Longitudinal Series*). Agargaon Hill Station, lat. $19^{\circ} 11'$, long. $74^{\circ} 55'$ —observed at in 1845—is situated on a low part of an extensive and irregularly shaped table-land, about 1 mile N. of that village, and $6\frac{1}{2}$ miles E. by N. of Shendi which is $\frac{1}{2}$ a mile E. of the high road from Ahmednagar to Aurangabad. It is in the lands of the village of Agargaon, taluka Nagar, district Ahmednagar.

The station as originally built consisted of a platform of loose stone masonry and contained three mark-stones, one at the ground level and the other two 7.13 and 13.54 feet respectively above it. When visited in 1882, the station was found to consist of a mound of loose boulders about 10 feet high and 30 feet in diameter, having a post—erected by a Survey Party about 2 or 3 years ago—rising $3\frac{1}{2}$ feet above it, the mound was raised 16.43 feet above a bench-mark on the ground level and a mark-stone inserted at that height. When again visited in 1883, the upper mark-stone was found in position and protected by the usual rectangular pillar of masonry. The directions and distances of the following places are:—Ahmednagar S.W., miles 9; Ranjani S.E. by E., miles $2\frac{1}{2}$; Kallur N.E. by N., miles $2\frac{1}{2}$; Pimpalgaon Uzani W. by S., miles $3\frac{1}{2}$; and Deogaon S.W., miles 3.

NOTE.—In some instances the names of Principal Stations, occurring in the foregoing descriptions, are given by two methods of spelling distinguished from each other by the use of Roman and Italic type, as Station XXV Anakrâdi (*Anakrâdi*): the latter spelling is in keeping with that adopted in the pages containing the observed angles printed in March 1879, which was based on a list of names of places for the Bombay Presidency published under the orders of the Government in September 1875; the spelling in Roman type is in accordance with that in a revised edition of the same published in 1880, and with the list of names for the Dominions of His Highness the Nizam, published in February 1883. It will be seen that the two methods differ but slightly, notwithstanding where differences occur, both renderings are given so as to remove all possible doubt as to the identity of a station. The method of spelling in Roman type is hereafter exclusively adopted in the publication of this Series.

February, 1883.

M. W. ROGERS,

In charge of Computing Office.

KHANPISURA MERIDIONAL SERIES.

PRINCIPAL TRIANGULATION. TRIANGLES.

No. of Triangle	Station	Spherical Excess	Corrected Plane Angle	Distance		
				Log. feet	Feet	Miles
1	Bálágara, XXIV					
	Búda, XXI	.59	80 17 42.41	5.1011137	126215.8	23.905
	Dhamnár, II	.59	70 28 25.72	5.0816499	120684.1	22.857
2	Búda, XXI	.58	29 13 51.87	4.7960398	62530.2	11.843
	Dhamnár, II	.61	39 23 51.52	4.9036849	80109.7	15.172
	Sítamau, I	.62	50 50 6.06	4.9906042	97859.8	18.534
3	Búda, XXI	.62	89 46 2.42	5.1011137	126215.8	23.905
	Bálágara, XXIV	.46	109 52 17.98	5.1233300	132840.4	25.159
	Sítamau, I	.45	43 51 10.02	4.9906042	97859.8	18.534
4	Sítamau, I	.45	26 16 32.00	4.7960898	62530.2	11.843
	Dhamnár, II	.58	64 39 56.81	4.9949085	98834.5	18.719
	Nigrun, III	.58	68 13 48.51	5.0066897	101552.3	31.239
5	Sítamau, I	.58	47 6 14.68	4.9036849	80109.7	15.172
	Nigrun, III	1.01	49 49 10.28	5.1007639	126114.2	23.885
	Dudhálá, IV	1.01	92 12 46.09	5.2173375	164944.4	31.239
		1.01	37 58 3.63	5.0066897	101552.3	19.233

Notes.—1. The values of the side are given in the same line with the opposite angle.
 2. Stations Bálágara, XXIV and Búda, XXI appertain to the Karachi Longitudinal Series of the North-West Quadrilateral.

No. of Triangle	Station	Spherical Excess	Corrected Plane Angle			Distance		
						Log. feet	Feet	Miles
6	Dudhāla, IV	1°22	47	4	33°98	5°0905100	123171°4	23°328
	Nigrun, III	1°22	84	21	17°45	5°2237339	167391°7	31°703
	Doo Dongri, V	1°22	48	34	8°57	5°1007639	126114°2	23°885
7	Dhamnār, II	°84	72	37	29°94	5°1002476	125964°3	23°857
	Nigrun, III	°84	58	53	12°01	5°0530789	113000°1	21°402
	Lohāri, VI	°84	48	29	18°05	4°9949085	98834°5	18°719
8	Nigrun, III	1°20.	77	26	24°92	5°1927175	155853°8	29°518
	Lohāri, VI	1°19	50	28	43°55	5°0905100	123171°4	23°328
	Deo Dongri, V	1°19	52	4	51°53	5°1002476	125964°3	23°857
9	Lohāri, VI	1°10	46	17	18°39	5°0560419	113773°7	21°548
	Deo Dongri, V	1°10	51	45	4°49	5°0920595	123611°7	23°411
	Dhanora, VII	1°10	81	57	37°12	5°1927175	155853°8	29°518
10	Deo Dongri, V	°44	61	51	12°38	5°0014904	100343°8	19°005
	Dhanora, VII	°44	29	24	46°44	4°7473178	55887°9	10°585
	Gurla, VIII	°45	88	44	1°18	5°0560419	113773°7	21°548
11	Dhanora, VII	°49	48	53	16°85	4°8895432	77543°1	14°686
	Gurla, VIII	°50	53	57	37°26	4°9202418	83222°7	15°762
	Karsod, IX	°50	77	9	5°89	5°0014904	100343°8	19°005
12	Lohāri, VI	°47	16	59	22°02	4°7786086	60063°2	11°376
	Dhanora, VII	°48	126	2	39°02	5°2206490	166206°9	31°479
	Kaula-ka-Māta, XI	°47	36	57	58°96	5°0920595	123611°7	23°411
13	Dhanora, VII	°38	73	41	37°68	4°9439963	87901°5	16°648
	Karsod, IX	°38	40	58	53°45	4°7786086	60063°2	11°376
	Kaula-ka-Māta, XI	°38	65	19	28°87	4°9202418	83222°7	15°762
14	Gurla, VIII	°40	82	4	20°27	4°9755439	94524°4	17°902
	Karsod, IX	°40	43	34	58°10	4°8181844	65793°7	12°461
	Jalālkhari, X	°40	54	20	32°63	4°8895432	77543°1	14°686
15	Jalālkhari, X	°92	56	8	23°26	5°0930463	123892°9	23°465
	Karsod, IX	°92	84	32	50°20	5°1717896	148521°6	28°129
	Harnāsa, XII	°92	39	18	46°54	4°9755439	94524°4	17°902
16	Kaula-ka-Māta, XI	°80	83	38	7°10	5°1363075	136869°7	25°922
	Karsod, IX	°79	56	42	6°59	5°0611079	115108°6	21°801
	Indrāwan, XIII	°79	39	39	46°31	4°9439963	87901°5	16°648
17	Karsod, IX	1°12	57	2	1°66	5°0969581	125013°8	23°677
	Harnāsa, XII	1°13	66	42	58°71	5°1363075	136869°7	25°922
	Indrāwan, XIII	1°12	56	14	59°63	5°0930463	123892°9	23°465
18	Harnāsa, XII	1°53	66	0	2°97	5°2162374	164527°1	31°160
	Indrāwan, XIII	1°53	70	2	22°61	5°2285994	169277°6	32°060
	Mograbā, XIV	1°52	43	57	34°42	5°0969581	125013°8	23°677
19	Harnāsa, XII	1°34	44	16	33°03	5°0806120	120396°0	22°802
	Mograbā, XIV	1°34	56	44	48°04	5°1590244	144219°6	27°314
	Singārethori, XV	1°35	78	58	38°93	5°2285994	169277°6	32°060
20	Singārethori, XV	1°27	52	47	43°93	5°1307296	135123°1	25°591
	Mograbā, XIV	1°27	81	59	45°88	5°2253018	167997°1	31°818
	Thūkri, XVII	1°27	45	12	30°19	5°0806120	120396°0	22°802

No. of Triangle	Station	Spherical Excess	Corrected Plane Angle	Distance		
				Log. feet	Feet	Miles
21	Indráwan, XIII	1°60	67 9 37°79	5°2224298	166889°8	31°608
	Mograbā, XIV	1°59	47 32 2°24	5°1257558	133584°4	25°300
	Gumánpur, XVI	1°60	65 18 19°97	5°2162374	164527°1	31°160
22	Gumánpur, XVI	2°58	65 59 27°74	5°3256814	211680°8	40°091
	Mograbā, XIV	2°59	67 56 19°04	5°3319590	214762°8	40°675
	Báwangaz, XVIII	2°58	46 4 13°22	5°2224298	166889°8	31°608
23	Mograbā, XIV	1°99	61 49 20°08	5°2784758	189878°5	35°962
	Báwangaz, XVIII	1°99	38 51 2°15	5°1307296	135123°1	25°591
	Thíkri, XVII	1°99	79 19 37°77	5°3256814	211680°8	40°091
24	Thíkri, XVII	1°85	85 13 40°81	5°3383251	217934°1	41°275
	Báwangaz, XVIII	1°85	34 30 59°66	5°0931439	123920°7	23°470
	Jalálabad, XIX	1°85	60 15 19°53	5°2784758	189878°5	35°962
25	Báwangaz, XVIII	1°93	50 26 42°92	5°2257597	168174°4	31°851
	Jalálabad, XIX	1°93	41 55 22°11	5°1635562	145732°4	27°601
	Bábákuvar, XX	1°93	87 37 54°97	5°3383251	217934°1	41°275
26	Báwangaz, XVIII	2°18	84 57 44°18	5°3597984	228980°4	43°368
	Thíkri, XVII	2°17	39 20 40°30	5°1635562	145732°4	27°601
	Bábákuvar, XX	2°17	55 41 35°52	5°2784758	189878°5	35°962
27	Bábákuvar, XX	1°43	77 18 58°03	5°2545349	179694°5	34°033
	Jalálabad, XIX	1°42	36 45 12°37	5°0422364	110213°9	20°874
	Ajnád, XXII	1°43	65 55 49°60	5°2257597	168174°4	31°851
28	Jalálabad, XIX	1°73	60 31 43°41	5°2172132	164897°2	31°231
	Ajnád, XXII	1°73	47 53 53°52	5°1477707	140530°6	26°616
	Árgaon, XXI	1°74	71 34 23°07	5°2545349	179694°5	34°033
29	Bábákuvar, XX	1°85	36 51 4°70	5°1477707	140530°6	26°616
	Jalálabad, XIX	1°85	97 16 57°08	5°3662899	232428°8	44°021
	Árgaon, XXI	1°85	45 51 58°22	5°2257597	168174°4	31°851
30	Ajnád, XXII	2°70	76 8 33°07	5°3738995	236537°2	44°799
	Árgaon, XXI	2°70	61 15 37°11	5°3290346	213616°4	40°458
	Valvádi, XXIII	2°70	42 35 49°82	5°2172132	164897°2	31°231
31	Árgaon, XXI	1°82	38 51 17°77	5°1792053	151079°4	28°614
	Valvádi, XXIII	1°82	40 19 17°93	5°1926514	155830°1	29°513
	Dhanvár, XXIV	1°83	100 49 24°30	5°3738995	236537°2	44°799
32	Ajnád, XXII	1°99	38 35 9°34	5°1926514	155830°1	29°513
	Árgaon, XXI	2°00	100 6 57°40	5°3908799	245968°7	46°585
	Dhanvár, XXIV	2°00	41 17 53°26	5°2172132	164897°2	31°231
33	Dhanvár, XXIV	1°45	58 39 52°48	5°1586444	144093°5	27°290
	Valvádi, XXIII	1°45	57 45 23°61	5°1543786	142685°1	27°024
	Sírsála, XXVI	1°46	63 34 43°91	5°1792053	151079°4	28°614
34	Ajnád, XXII	2°68	44 52 42°53	5°2257841	168183°8	31°853
	Valvádi, XXIII	2°69	71 27 23°56	5°3540683	225979°1	42°799
	Anakrádi, XXV	2°69	63 39 53°91	5°3296346	213616°4	40°458
35	Anakrádi, XXV	1°96	42 38 37°84	5°1708844	148212°4	28°071
	Valvádi, XXIII	1°97	87 7 0°47	5°3394641	218506°4	41°384
	Sútámla, XXVII	1°96	50 14 21°69	5°2257841	168183°8	31°853

No. of Triangle	Station	Spherical Excess	Corrected Plane Angle	Distance		
				Log. feet	Feet	Miles
36	Valvádi, XXIII	1'47	60 44 52'51	5'1698059	147844'7	28'001
	Sirsála, XXVI	1'47	61 0 11'87	5'1708844	148212'4	28'071
	Sátmála, XXVII	1'47	58 14 55'62	5'1586444	144093'5	27'290
37	Sirsála, XXVI	1'71	60 41 43'38	5'2054011	160472'7	30'393
	Sátmála, XXVII	1'71	65 50 52'17	5'2250845	167913'1	31'802
	Pophla, XXVIII	1'71	53 27 24'45	5'1698059	147844'7	28'001
38	Sirsála, XXVI	1'72	41 43 26'80	5'1203540	131933'2	24'987
	Pophla, XXVIII	1'73	80 23 2'18	5'2910314	195448'1	37'017
	Rájur, XXIX	1'72	57 53 31'02	5'2250845	167913'1	31'802
39	Pophla, XXVIII	1'42	67 22 46'14	5'1911635	155297'1	29'412
	Rájur, XXIX	1'41	60 58 25'86	5'1676370	147108'2	27'861
	Jámkhed, XXXI	1'41	51 38 48'00	5'1203540	131933'2	24'987
40	Sátmála, XXVII	1'14	43 16 33'97	5'0450926	110941'1	21'012
	Pophla, XXVIII	1'14	54 10 0'68	5'1179495	131204'8	24'849
	Yerúl, XXX	1'14	82 33 25'35	5'2054011	160472'7	30'393
41	Pophla, XXVIII	1'25	104 36 39'30	5'3125663	205383'9	38'898
	Yerúl, XXX	1'25	43 52 32'79	5'1676370	147108'2	27'861
	Jámkhed, XXXI	1'24	31 30 47'91	5'0450926	110941'1	21'012
42	Rájur, XXIX	1'80	47 39 8'77	5'1718949	148557'6	28'136
	Jámkhed, XXXI	1'81	81 45 34'19	5'2987007	198930'2	37'676
	Áhirmal, XXXII	1'80	50 35 17'04	5'1911635	155297'1	29'412
43	Áhirmal, XXXII	2'23	51 39 22'61	5'2799183	190510'2	36'081
	Jámkhed, XXXI	2'24	90 38 20'90	5'3854073	242888'7	46'002
	Mathuri, XXXIII	2'23	37 42 16'49	5'1718949	148557'6	28'136
44	Yerúl, XXX	2'15	50 56 31'86	5'2169643	164802'7	31'213
	Jámkhed, XXXI	2'15	53 39 19'99	5'2328657	170948'7	32'377
	Dhaigaon, XXXIV	2'16	75 24 8'15	5'3125663	205383'9	38'898
45	Jámkhed, XXXI	1'92	50 46 58'24	5'1878535	154118'0	29'189
	Dhaigaon, XXXIV	1'92	73 16 31'92	5'2799183	190510'2	36'081
	Mathuri, XXXIII	1'92	55 56 29'84	5'2169643	164802'7	31'213
46	Dhaigaon, XXXIV	2'04	82 51 24'07	5'3306386	214110'8	40'551
	Mathuri, XXXIII	2'04	51 33 51'00	5'2279535	169026'0	32'013
	Ágargaon, XXIV	2'04	45 34 44'93	5'1878535	154118'0	29'189
47	Mathuri, XXXIII	1'56	50 49 39'38	5'2222227	166810'2	31'593
	Ágargaon, XXIV	1'55	33 29 7'07	5'0745027	118714'2	22'484
	Chincholi, XXIII	1'56	95 41 13'55	5'3306386	214110'8	40'551
48	Dhaigaon, XXXIV	1'41	32 50 48'17	5'0745027	118714'2	22'484
	Mathuri, XXXIII	1'41	102 23 32'57	5'3299499	213771'5	40'487
	Chincholi, XXIII	1'41	44 45 39'26	5'1878535	154118'0	29'189

NOTE.—Stations Chincholi XXIII and Ágargaon XXIV appertain to the Bombay Longitudinal Series of the Southern Trigon.

November, 1892.

J. ECCLES,

In charge of Computing Office.

KIANPISURA MERIDIONAL SERIES.

SECONDARY TRIANGULATION. TRIANGLES.

PRINCIPAL-AUXILIARY AND SECONDARY STATIONS, AND INTERSECTED POINTS.

Differences between the common sides of two triangles are shown by the small figures in the 5th and 12th columns between the data of the triangles, the first in order having supplied the greater value.

No. of Triangle	Station	Corrected Plane Angle	Distance			No. of Triangle	Station	Corrected Plane Angle	Distance			Theodolite used
			Log. feet	Feet	Miles				Log. feet	Feet	Miles	
40	Bāligara, XXIV. Dhammar, II Barkhera Hill Bush	35 45 33 3 22 5	5°08'28.5 4°09'59.6 5°08'16.50	111760 11236 120684	21.167 2.128 22.857	54	Sitamau, I Nigruu, III Pachin	45 8 10 54 33 15	4°86'34.45 4°92'39.09 5°00'66.90	73021 83028 101552	13.840 15.896 19.233	Inch 15 "
50	Sitamau, I Dhammar, II Digau	51 49 46 41 35 8 86 35 6	4°79'99.76 4°72'45.3 4°90'36.85	63002 53266 80110	11.949 10.088 15.172	55	Dudhala, IV Nigruu, III Gualed Hill Tree	70 42 44 22 48 11	5°07'64.95 4°68'99.26 5°100'76.4	119260 48970 126114	22.587 9.275 23.885	" " "
51	Bāligara, XXIV Dhammar, II Digau	28 59 24 38 28 31 112 40 45	4°79'99.76 4°91'05.67 5°08'16.50	63002 81389 120684	11.949 15.415 22.857	56	Sitamau, I Nigruu, III Gualed Hill Tree	61 54 0 69 24 36	5°07'64.95 5°102'39.6 5°00'66.90	119260 126560 101552	22.587 23.970 19.233	" " "
52	Sitamau, I Dhammar, II Sitamau Hill Tree	65 17 9 7 58 44	4°86'07.60 4°06'48.95 4°92'36.85	75991 11612 80110	14.392 2.199 15.172	57	Dudhala, IV Nigruu, III Tarauli	30 53 4 27 44 47 121 22 9	4°87'97.70 4°83'36.7 5°100'76.4	75818 68765 126114	14.359 13.024 23.885	14 " "
53	Dudhala, IV Nigruu, III Pachin	33 8 58 37 39 32	4°86'34.45 4°91'06.09 5°100'76.4	73021 81585 126114	13.830 15.452 23.885	58	Sitamau, I Nigruu, III Tarauli	44 48 30 64 28 0 70 43 30	4°87'97.70 4°98'71.11 5°00'66.90	75818 97076 101552	14.359 18.366 19.233	" " "

Notes.—1. Names followed by Roman numerals are those of Principal Stations.
2. The value of the side is given in the same line with the opposite angle.

Station Bāligara XXIV appertains to the Karachi Longitudinal Series of the North-West Quadrilateral.

No. of Triangle	Station	Corrected Plane Angle	Distance			Theodolite used	No. of Triangle	Station	Corrected Plane Angle	Distance			Theodolite used
			Log. feet	Feet	Miles					Log. feet	Feet	Miles	
107	Renti Deogarh Indore Pagoda	h.s. " "	23 15 15 24 19 21 4 767241	31294 32647 58511	5.927 6.183 11.082	Inch 7 "	119	Singarchori, XV Mograbha, XIV Vatli	12 26 47 153 18 29 5.080612	105448 219772 120396	19.971 41.623 22.802	Inch 15 "	
108	Harnása, XII Singarchori, XV Kila Mandil Hill Peak	50 27 4 61 17 5 132174	4.495467 5.132174 4.767241	119499 135573 144220	22.632 25.677 27.314	15 "	120	Bawangaz, XVIII Mograbha, XIV Vatli	62 52 22 87 17 12 5.275557	105448 188007 121681	19.971 35.721 40.091	" 7	
109	Singarchori, XV Harnása, XII Machia Hill Peak	52 54 50 40 43 34 5 159024	5.061757 4.974445 5.159024	115281 94285 144220	21.833 17.857 27.314	" "	121	Gumánpur, XVI Mograbha, XIV Lálgarh Hill Pagoda	2 21 0 1 32 16 5.004007	100027 66055 166590	19.115 12.510 31.608	15 "	
110	Mograbha, XIV Harnása, XII Machia Hill Peak	35 47 59 85 0 8 5 228599	5.061757 5.292981 5.228599	115281 196327 169278	21.833 37.183 32.060	" "	122	Singarchori, XV Mograbha, XIV Lálgarh Hill Pagoda	15 8 29 146 42 13 5.004007	100027 212119 120396	19.115 40.174 22.802	" "	
111	Harnása, XII Singarchori, XV Machia Hill Temple	38 53 30 57 45 26 5 159024	4.959811 5.089220 5.159024	91161 122806 144220	17.265 23.259 27.314	7 15	123	Mograbha, XIV Gumánpur, XVI Dhutni Peak	66 8 2 4 33 21 5.208757	161718 14046 166590	30.628 2.660 31.608	" "	
112	Harnása, XII Singarchori, XV Ambáh	33 7 21 65 3 11 5 159024	4.900996 5.120924 5.159024	79615 132106 144220	15.079 25.020 27.314	" "	124	Mograbha, XIV Singarchori, XV Nálchha Hill Dargah	15 15 8 5 26 44 4.953367	89612 32327 120396	16.972 6.123 22.802	" "	
113	Ambáh Singarchori, XV Mhow Church	h.s. 20 8 39 115 48 4	4.788804 4.483646 4.900996	61490 30454 79615	11.646 5.768 15.079	" 7	125	Harnása, XII Singarchori, XV Nálchha Hill Dargah	35 52 37 73 31 56 5.159024	89612 146037 144220	16.972 27.772 27.314	" "	
114	Machia Hill Peak Singarchori, XV Mhow Church	h.s. 8 0 18 157 36 47	4.788804 4.537504 4.974445	61490 34475 94285	11.646 6.529 17.857	15 7	126	Bawangaz, XVIII Thikri, XVII Songarh Peak	31 58 38 86 11 9 5.057134	114060 214000 189879	21.602 40.701 35.962	" "	
115	Singarchori, XV Mhow Church Dhajara Hill Peak	h.s. 52 54 43 49 32 20	4.700985 4.680437 4.788804	50233 47911 61490	9.514 9.074 11.646	15 7	127	Singarchori, XV Thikri, XVII Songarh Peak	42 1 7 38 21 2 5.057134	114060 105727 167997	21.602 20.024 31.818	" "	
116	Mograbha, XIV Singarchori, XV Jánápúr Hill Pagoda	7 37 33 110 19 0 5 106550	4.257327 5.106550 5.080612	18085 127806 120396	3.425 24.206 22.802	15 "	128	Thikri, XVII Mograbha, XIV Jánmna Hill Peak	16 14 4 45 29 1 5.039058	42897 109410 135123	8.124 20.722 25.591	" "	
117	Mograbha, XIV Singarchori, XV Asakheri Hill Tree	29 38 57 74 48 48 5 079159	4.788928 5.079159 5.080612	61508 119994 120396	11.649 22.726 22.802	" "	129	Singarchori, XV Mograbha, XIV Jánmna Hill Peak	16 32 42 36 30 46 4.632426	42897 89630 120396	8.124 16.975 22.802	" "	
118	Harnása, XII Singarchori, XV Dhar Hill Pagoda No. 1	68 47 40 46 15 18 5 159024	5.171474 5.060716 5.159024	148414 115005 144220	28.109 21.781 27.314	" "	130	Singarchori, XV Thikri, XVII Gosáinbaira	12 48 38 164 56 1 4.405504	25439 143302 167997	4.818 27.141 31.818	14 "	

No.	Station	Corrected Plane Angle	Distance			No. of Triangles	Station	Corrected Plane Angle	Distance			Theodolite used
			Log. feet	Feet	Miles				Log. feet	Feet	Miles	
131	Bāwāngaz, XVIII Sangarh Peak Chakori	20 46 56 147 30 0	5°15'02.5 4°00'07.12 5°33'23.7	14191.4 81220 214900	26.878 15.384 40.701	143	Jalālabād, XIX Ajnād, XXII Tasdin Hill Temple No. 2	39 28 47 14 45 4	5°14'06.35 4°75'12.05 5°25'45.35	140811 56300 179695	26.669 10.680 34.033	Inch 15 "
132	Bāwāngaz, XVIII Chakori	45 39 31 65 19 50	4°70'39.20 4°89'79.56 4°00'07.12	62219 79006 81220	11.784 14.973 15.384	144	Argaon, XXI Ajnād, XXII Tasdin Hill Temple No. 2	58 35 53 33 8 51	5°14'06.35 4°95'22.40 5°21'72.13	140811 90207 161897	26.669 17.035 31.231	" " "
133	Abipuri Hill Pagoda Chakori	65 28 30 104 46 30	4°76'74.59 4°03'73.07 4°70'39.20	58541 10897 62219	11.087 2.064 11.784	145	Jalālabād, XIX Argaon, XXI Sātpuda Hill Peak	13 43 41 101 45 42	4°56'75.68 5°10'30.30 5°14'77.71	36946 12446 140531	6.997 28.807 26.616	" " "
134	Bāwāngaz, XVIII Mogarba, XIV Ambālpant Hill Temple	93 14 45 2 38 22	5°32'27.70 3°09'12.13 5°32'56.81	212461 9800 211681	40.239 1.856 40.091	146	Dhanvār, XXIV Argaon, XXI Sātpuda Hill Peak	13 30 2 86 32 54	4°56'75.68 5°19'55.77 5°10'26.51	36946 157071 155830	6.997 29.919 29.513	" " "
135	Gumtāpur, XVI Mogarba, XIV Ambālpant Hill Temple	64 20 37 70 34 44	5°32'27.70 5°34'09.16 5°22'43.0	212461 222288 166890	40.239 42.100 31.608	147	Dhanvār, XXIV Sirsāda, XXVI Pādhi	118 10 25 45 28 40	5°24'05.35 4°75'07.51 5°15'43.79	176415 5631 142085	33.412 10.669 27.024	" 7 "
136	Bāwāngaz, XVIII Bābākuvar, XX Bori Hill Peak	12 27 23 11 33 42	4°88'77.9 4°85'58.2 5°16'35.56	77229 71760 145732	14.627 13.591 27.601	148	Dhanvār, XXIV Pādhi Manvel	52 5 18 35 6 20	4°88'07.4 4°90'40.8 4°75'07.51	77281 97836 5631	14.637 18.530 10.669	15 7 "
137	Bāwāngaz, XVIII Bābākuvar, XX Naktimāta Peak	4 44 30 5 25 7	4°83'43.64 4°89'17.0 5°16'35.56	68291 78013 145732	12.934 14.775 27.601	149	Dhanvār, XXIV Sirsāda, XXVI Padundā	74 12 58 77 15 0	5°14'53.30 4°84'43.57 5°15'43.79	140776 69881 142685	26.662 13.235 27.024	15 7 "
138	Thakri, XVII Jalālabād, XIX Bijgakh Hill Fort	6 57 18 81 54 50	4°17'04.36 5°08'58.89 5°09'31.44	15008 122713 133921	2.842 23.241 23.470	150	Valēdi, XXIII Dhanvār, XXIV Jalka Peak	2 21 50 11 55 54	4°40'20.24 5°10'20.77 5°17'29.05	35236 126406 151079	4.780 23.958 28.614	15 " "
139	Bābākuvar, XX Ajnād, XXII Vajjari Hill	25 58 18 24 47 41	4°79'45.75 4°77'57.70 5°04'22.36	62312 59672 110214	11.802 11.301 20.874	151	Dhanvār, XXIV Sirsāda, XXVI Dohori	90 30 58 70 12 45	5°18'07.02 5°15'43.79	151633 50047 142685	28.718 9.479 27.024	" 7 "
140	Bābākuvar, XX Argaon, XXI Khanderi Hill	20 39 27 17 39 27	5°11'06.61 5°08'40.8 5°36'29.0	131723 114395 234429	24.948 21.666 44.021	152	Dhanvār, XXIV Sirsāda, XXVI Kokatinbhora	67 15 24 16 53 23	5°12'14.06 4°61'08.41	132281 41672 142685	25.053 7.892 27.024	15 7 "
141	Bābākuvar, XX Ajnād, XXII Tasdin Hill Temple No. 1	57 30 54 80 40 5	5°14'08.12 5°21'53.26 5°04'22.36	110868 164182 110214	26.680 31.095 20.874	153	Dhanvār, XXIV Kokatinbhora Jānnar Hill Peak	7 30 51 162 9 5	4°48'25.46 4°85'24.60 4°61'08.41	30377 71108 41672	5.753 13.485 7.892	15 7 "
142	Argaon, XXI Ajnād, XXII Tasdin Hill Temple No. 1	58 38 2 33 9 41	5°14'08.12 4°95'41.3 5°21'72.13	140868 90243 161897	26.680 17.091 31.231	154	Dhanvār, XXIV Sirsāda, XXVI Sanner	46 52 39 18 52 38	5°05'77.41 4°70'44.11 5°15'43.79	114219 50630 142685	21.633 9.559 27.024	15 " "

No. of Triangle	Station	Corrected Plane Angle	Distance			No. of Triangle	Station	Corrected Plane Angle	Distance			Theodolite used
			Log. feet	Feet	Miles				Log. feet	Feet	Miles	
155	Dhanvār, XXIV Valvādi, XXIII Bāmbrud Hill Pagoda	24 24 35 11 36 30 5 179205	5 026020 4 713470 5 179205	106175 51693 151079	20 100 9 791 28 614	167	Lalīng Hill Temple Valvādi, XXIII Bāmbrud	36 56 47 113 9 7	4 922241 5 003488 5 188100	83607 100806 154206	15 835 19 092 29 206	Inch 15 7
156	Sīrsālā, XXVI Valvādi, XXIII Bāmbrud Hill Pagoda	47 20 50 46 8 55 5 158644	5 026020 5 017472 5 158644	106175 104105 144094	20 100 19 717 27 290	168	Anakvādi, XXV Valvādi, XXIII Bāmbrud	41 7 48 111 16 25	4 922241 5 074508 5 225784	83607 118716 168184	15 835 22 484 31 853	15 7
157	Dhanvār, XXIV Valvādi, XXIII Mohārī	33 7 20 21 54 37 5 179205	5 003201 4 837557 5 179205	100740 68795 151079	19 079 13 029 28 614	169	Valvādi, XXIII Sātmālā, XXVII Junvāna Hill Peak	86 25 26 43 40 52	5 286453 5 126554 5 170884	193398 13830 148212	36 628 25 347 28 071	15 "
158	Sīrsālā, XXVI Valvādi, XXIII Mohārī	43 22 38 35 50 48 5 158644	5 003201 4 933086 5 158644	100740 85899 144094	19 079 16 269 27 290	170	Anakvādi, XXV Sātmālā, XXVII Junvāna Hill Peak	39 56 59 6 33 32 5 339404	5 286453 4 536599 5 339404	193398 34403 218506	36 628 6 516 41 384	" "
159	Valvādi, XXIII Dhanvār, XXIV Mohārī Hill Peak	20 6 58 29 30 40 5 179205	4 833800 4 939826 5 179205	68202 97684 151079	12 917 18 501 28 614	171	Sātmālā, XXVII Valvādi, XXIII Arvi Peak	48 21 55 85 21 6 5 170884	5 185439 5 310458 5 170884	153264 204389 148212	29 027 38 710 28 071	" "
160	Anakvādi, XXV Valvādi, XXIII Lalīng Hill Temple	38 1 9 4 11 1 5 225784	5 188100 4 261615 5 225784	154206 18265 168184	29 206 3 459 31 853	172	Anakvādi, XXV Valvādi, XXIII Arvi Peak	17 28 55 1 45 56 5 225784	5 185439 4 196422 5 225784	153264 15719 168184	29 027 2 077 31 853	" "
161	Ajnād, XXII Valvādi, XXIII Lalīng Hill Temple	42 43 3 67 16 25 5 188100	5 188100 5 321535 5 329635	154206 209665 213616	29 206 39 700 40 458	173	Sātmālā, XXVII Sīrsālā, XXVI Pāchōra	36 44 23 7 27 41 71 47 56	4 968930 5 168956 5 168906	93096 147556 147845	17 632 27 946 28 001	" 7
162	Lalīng Hill Temple Valvādi, XXIII Kankrāj	51 14 58 99 10 4 5 188100	4 887130 5 085710 5 188100	77113 121818 154206	14 605 23 072 29 206	174	Dhanvār, XXIV Sīrsālā, XXVI Pāchōra	40 37 19 53 7 18 5 154379	4 968930 5 058348 5 154379	93096 114379 142085	17 632 21 663 27 024	15 "
163	Anakvādi, XXV Valvādi, XXIII Kankrāj	55 25 59 97 31 51 5 225784	4 887130 5 145101 5 225784	77113 130618 168184	14 605 26 458 31 853	175	Pāchōra Sīrsālā, XXVI Varod	146 6 11 23 50 30	5 108724 4 604363 4 968930	128447 40213 93096	24 327 7 616 17 632	7
164	Lalīng Hill Temple Kankrāj Dhār	95 45 3 60 13 26 5 085710	4 756947 5 145013 5 085710	57141 139611 121818	10 822 26 447 23 072	176	Mohārī Sīrsālā, XXVI Varod	95 16 20 41 45 10	5 108724 4 944145 4 933986	128447 87032 85999	24 327 16 654 16 269	" "
165	Anakvādi, XXV Kankrāj Dhār	97 23 16 61 32 14 5 145191	4 756947 5 107519 5 145191	57141 157586 139608	10 822 20 846 26 458	177	Pāchōra Varod Bāmbrud	41 17 40 115 10 10 23 32 10	4 822531 4 950709 4 604363	66456 91140 40213	12 586 17 261 7 616	" "
166	Anakvādi, XXV Lalīng Hill Temple Songur	41 12 35 7 6 30 5 042317	4 987849 5 042317 4 201615	97241 110234 18265	18 417 20 878 3 459	178	Sātmālā, XXVII Valvādi, XXIII Antār Hill Fort	41 5 13 16 56 34	5 060023 4 700837 5 170884	114821 50014 148212	21 746 9 643 28 071	15 "

Triangle No.	Station	Corrected Plane Angle	Distance			Theodolite used	No. of Triangle	Station	Corrected Plane Angle	Distance			Theodolite used
			Log. feet	Feet	Miles					Log. feet	Feet	Miles	
179	Sirsāla, XXVI Valvādi, XXIII Antūr Hill Fort.	52 23 29 43 48 20 5 158644	5 060023 5 001429 5 158644	114821 100329 144094	21 746 19 002 27 490	Inch 15 "	191	Valvādi, XXIII Sirsāla, XXVII Koralla Hill	56 32 47 54 19 41 5 170884	132345 128861 148212	25 065 24 406 28 071	Inch 15 "	
180	Antūr Hill Fort Sirsāla, XXVI Sarangī	101 31 51 45 34 8 h.s.	4 882617 5 001429 h.s.	76316 100329 h.s.	14 454 19 002 h.s.	" 7 "	192	Sirsāla, XXVI Rājūr, XXIX Undangoon	32 50 27 9 33 22 h.s.	157198 48122 195448	29 772 9 114 37 017	" " "	
181	Pāchora Sirsāla, XXVI Sarangī	54 54 3 38 40 54 h.s.	4 882617 4 795655 h.s.	76316 58298 93096	14 454 17 032 h.s.	15	193	Sirsāla, XXVI Undangoon Vist Hill Peak	20 41 30 104 58 40 h.s.	20930 57223 48122	3 064 10 838 9 114	7 " "	
182	Antūr Hill Fort Sirsāla, XXVI Kulāh	127 10 3 34 5 3 h.s.	4 759985 5 154312 5 001429	57542 42663 100329	10 898 27 020 19 002	" 7 "	194	Valvādi, XXIII Dhanvār, XXIV Varad	79 30 23 39 0 35 h.s.	169063 108227 151079	32 019 20 498 28 014	15 " "	
183	Sarangī Sirsāla, XXVI Kulāh	25 38 12 108 49 56 h.s.	4 759985 4 542601 4 882617	57542 34887 76316	10 898 6 067 14 454	15 7	195	Pophla, XXVIII Rājūr, XXIX Jalki Hill Pagoda	77 18 51 52 58 0 5 120354	168718 138055 131933	31 054 26 147 24 097	7 7 "	
184	Rājūr, XXIX Pophla, XXVIII Ghātumbri	63 49 1 42 27 23 h.s.	5 244012 5 273274 5 120354	175393 187618 131933	33 218 35 534 24 987	15 7	196	Sirsāla, XXVI Rājūr, XXIX Jalki Hill Pagoda	27 54 26 4 55 33 5 291031	168718 30953 195448	31 054 5 862 37 017	15 7 "	
185	Sirsāla, XXVI Pophla, XXVIII Ghātumbri	107 12 22 66 8 10 h.s.	5 244012 4 328125 5 225035	175393 21288 167913	33 218 4 032 31 802	15 7	197	Sirsāla, XXVI Rājūr, XXIX Palsi	27 22 14 17 44 53 h.s.	126813 84083 195448	24 018 15 925 37 017	15 " "	
186	Sirsāla, XXVI Ghātumbri Ausa Hill Fort	37 19 45 103 16 45 h.s.	4 308367 4 513843 4 328125	20341 32647 21288	3 853 6 183 4 032	15 7	198	Sirsāla, XXVI Rājūr, XXIX Sarola	23 46 20 15 6 50 h.s.	125500 81177 195448	23 769 15 374 37 017	" " "	
187	Dhanvār, XXIV Sirsāla, XXVI Jaranū Hill Pagoda	3 7 12 13 6 39 h.s.	4 443802 5 003696 5 154379	27784 115796 142685	5 262 21 931 27 024	15 "	199	Palsi Rājūr, XXIX Sarola	72 33 27 32 51 43 74 34 50	125500 71380 126813	23 769 13 519 24 018	7 15 7	
188	Sarangī Sirsāla, XXVI Jaranū Hill Pagoda	13 57 50 27 33 3 h.s.	4 443802 4 726372 4 882617	27784 53256 76316	5 262 10 086 14 454	7 15	200	Sarola Sirsāla, XXVI Moda	59 56 17 92 23 36 h.s.	70319 81177 909433	13 318 7 445 15 374	" " "	
189	Sirsāla, XXVI Ghātumbri Baitalvādi Fort	17 26 17 144 16 25 h.s.	4 308124 4 597824 4 328125	20329 39912 21288	3 850 7 502 4 032	" 7 "	201	Palsi Sirsāla, XXVI Moda	55 2 23 101 28 27 201 29 10	70319 34178 84083	13 318 6 473 15 925	" " "	
190	Dhanvār, XXIV Sirsāla, XXVI Jala Hill Peak	48 56 59 71 31 57 h.s.	5 096427 5 106018 5 154379	124801 157043 142685	23 048 29 743 27 024	15 "	202	Sarola Rājūr, XXIX Silād	47 49 13 11 35 1 120 35 46	108043 29276 125500	20 463 5 545 23 769	" 15 7	

No. of Triangle	Station	Corrected Plane Angle	Distance			Theodolite used	No. of Triangle	Station	Corrected Plane Angle	Distance			Theodolite used
			Log. feet	Feet	Miles					Log. feet	Feet	Miles	
203	Sátma, XXVI Rájur, XXIX Sillód	s.	5° 03' 39.5 4° 20' 33 3° 31' 49	1080.33 8780.3 195448	34 20.463 10.641	Inch 15 "	215	Kanad Sátma, XXVII Andaner Peak	h.s.	7° 52' 0 7° 39' 35	18028 17556 35258	Inch 7 15	
204	Palsi Sillód Sindphal Hill Pagoda	h.s. s.	83° 57' 0 53° 33' 55	4° 8' 12.34 4° 74' 9.204 4° 67' 32.16	13° 14.0 10° 6.31 8° 9.24	7 "	216	Jamdi Sátma, XXVII Andaner Peak	h.s.	24° 9' 38 46° 8' 40	18028 31761 41470	7 15	
205	Sillód Palsi Undangaon Hill Tree	s. h.s.	96° 8' 16 44° 4' 35	4° 86' 45.94 4° 70' 9.401 4° 67' 32.16	7321.4 5122.3 4712.1	" "	217	Jamdi Kanad Andaner Masjid	h.s. "	33° 23' 0 53° 59' 40	14298 21021 25958	7 "	
206	Sarola Palsi Undangaon Hill Tree	h.s. "	79° 0' 51 27° 49' 54	4° 86' 45.94 4° 54' 18.28 4° 85' 35.79	7321.4 34820 71380	" "	218	Jamdi Kanad Mundvadi Peak	h.s. "	115° 36' 35 22° 14' 40	34884 14644 25958	" "	
207	Sarola Sillód Bokardhan Tower	h.s. s.	46° 27' 25 97° 5' 10	4° 55' 28.17 4° 68' 9.35 4° 46' 55.11	3571.2 4880.2 29276	" "	219	Sátma, XXVII Jamdi Dunggaon Hill Pagoda	h.s.	72° 51' 9 80° 12' 55	87487 90225 41470	15 7	
208	Palsi Sillód Nirud Tower	h.s. s.	61° 21' 20 33° 37' 55	4° 61' 8.166 4° 41' 8.201 4° 67' 32.16	4151.1 26198 4712.1	" "	220	Pophla, XXVIII Rájur, XXIX Dunggaon Hill Pagoda No. 1		125° 12' 2 15° 0' 22	168444 53374 131933	15 "	
209	Palsi Moda Upli Pagoda	h.s. "	78° 43' 5 37° 0' 20	4° 57' 0.595 4° 35' 8.88 4° 53' 37.45	3720.4 22834 34178	" "	221	Pophla, XXVIII Rájur, XXIX Dunggaon Hill Pagoda No. 2		82° 24' 29 11° 43' 13	131117 26970 131933	" "	
210	Yerul, XXX Pophla, XXVIII Rail	h.s.	94° 39' 11 39° 34' 21	5° 188' 38.2 4° 99' 39.2 5° 04' 50.93	154306 98626 110941	15 "	222	Pophla, XXVIII Yerul, XXX Waragaon Hill Tomb		34° 12' 50 14° 14' 35	83345 36469 110941	" "	
211	Sátma, XXVII Pophla, XXVIII Rail	h.s.	74° 0' 16 14° 35' 41	5° 188' 38.2 4° 66' 86.7 5° 20' 50.401	154306 40448 160473	" "	223	Pophla, XXVIII Yerul, XXX Bondagaon Hill Tree		21° 57' 28 15° 11' 41	68488 48147 110941	" "	
212	Sátma, XXVII Yerul, XXX Jamdi	h.s.	41° 58' 55 15° 26' 52	5° 01' 76.19 4° 61' 77.29 5° 11' 70.50	104140 41470 131205	" "	224	Pophla, XXVIII Yerul, XXX Ganori Peak		18° 41' 34 10° 38' 5	72593 41800 110941	" "	
213	Sátma, XXVII Yerul, XXX Delier Hill Temple	h.s.	76° 35' 12 33° 49' 44	5° 134' 11.2 4° 89' 17.56 5° 11' 70.50	136180 77939 131205	" "	225	Pophla, XXVIII Yerul, XXX Golgaon	h.s.	6° 0' 54 7° 19' 12	50404 61285 110941	" "	
214	Sátma, XXVII Jamdi Kanad	h.s. "	38° 29' 5 57° 42' 3	4° 41' 43.69 4° 54' 7.60 4° 61' 77.29	25958 35258 41470	" "	226	Yerul, XXX Golgaon Guddana Hill Pagoda	h.s.	21° 30' 35 60° 20' 20	18670 44246 50404	15 7	

* Deduced base.

No. of Triangle	Station	Corrected Plane Angle	Distance			No. of Triangle used	Station	Corrected Plane Angle	Distance			No. of Triangle used
			Log. feet	Feet	Miles				Log. feet	Feet	Miles	
227	Yerd, XXX Jankhed, XXXI Gadgaon Hill Peak	44 33 35 10 10 8	5 246705 5 312566	776508 205384	33.430 8.412 38.898	230	Popla, XXVIII Rajur, XXXI Muramba	41 40 56 24 31 54 113 47 10	4 981727 4 777159 5 120354	95880 59893 131933	18.159 11.338 21.987	230
228	Yerd, XXX Jankhed, XXXI Jatoda	40 3 36 12 34 16 127 22 8	5 220948 4 750100 5 312566	166321 56247 205384	31.500 10.653 38.898	240	Popla, XXVIII Muramba Kankura Hill Tree	70 42 35 26 18 50	4 752336 4 427117 4 777150	56929 26737 59863	10.782 5.064 11.338	240
229	Yerd, XXX Jankhed, XXXI Jatoda Hill Tree	39 54 23 12 55 57	5 221260 4 747262 5 312566	166441 55955 205384	31.523 10.579 38.898	241	Muramba Rajur, XXXI Nandked Hill Tomb	56 52 59 23 19 8	4 911123 4 585637 4 981727	81493 38516 95880	15.434 7.205 18.159	241
230	Popla, XXVIII Jankhed, XXXI Jatoda Hill Tree	100 36 19 19 4 52	5 221260 4 743166 5 167637	166441 55356 147108	31.523 10.484 27.861	242	Jankhed, XXXI Rajur, XXXI Nandked Hill Tomb	31 38 29 59 45 41	4 911123 5 127775 5 191164	81493 134207 155297	15.434 25.418 29.412	242
231	Jankhed, XXXI Popla, XXVIII Rasulpur	97 48 55 35 27 44	4 904734 5 247788 5 167637	89303 776024 147108	15.209 33.508 27.861	243	Popla, XXVIII Rajur, XXXI Pallaekhed Hill Tree	4 37 15 159 3 9	4 577509 5 224764 5 120354	37809 167786 131933	7.161 31.778 24.987	243
232	Yerd, XXX Popla, XXVIII Rasulpur	16 56 19 6 47 46	4 904734 4 513443 5 045093	89303 32617 110941	15.209 6.177 21.012	244	Muramba Rajur, XXXI Malagaon	105 1 44 55 49 56	4 579706 5 048898 4 981727	37993 11017 95880	7.196 21.196 18.159	244
233	Gadgaon Yerd, XXX Reza	12 44 43 29 33 0	4 219513 4 566166 4 702465	16577 38868 50404	3.140 6.983 9.546	245	Jankhed, XXXI Rajur, XXXI Malagaon	14 2 29 68 35 11	4 579700 5 103704 5 191104	37993 145282 155297	7.196 27.610 29.412	245
234	Rasulpur Yerd, XXX Reza	30 21 43 53 38 31 95 59 46	4 219513 4 421798 4 513443	16577 26112 32617	3.140 5.002 6.177	246	Rajur, XXXI Malagaon No. 1 h.s.	123 33 2 53 30 0	3 385947 4 595374 4 579700	2432 39389 37993	0.461 7.460 7.196	246
235	Jankhed, XXXI Malagaon, XXXIV Yerd Hill Tree	53 41 36 75 15 55	5 232467 5 311685 5 216904	170792 204068 164863	32.347 38.820 31.213	247	Rajur, XXXI Malagaon Wadana Peak	44 20 18 87 12 30	4 585643 4 720716 4 595374	36783 52507 39389	6.966 9.956 7.460	247
236	Yerd, XXX Duaigao, XXXIV Mifanta Peak	55 42 13 13 52 36	5 178102 4 640660 5 232866	150666 43748 179949	28.541 8.286 32.377	248	Rajur, XXXI Malagaon Dongaoon Hill Dipmal	22 41 43 53 6 20	4 195245 4 511800 4 595374	15676 32494 39389	2.969 6.154 7.460	248
237	Popla, XXVIII Yerd, XXX Mahoti Peak	74 20 14 19 28 31	5 039621 4 569021 5 035093	107059 37070 110941	20.276 7.021 21.012	249	Popla, XXVIII Muramba Rajur Hill Temple	41 39 5 113 49 50	4 981690 5 120432 4 777159	95872 131936 59863	18.157 24.992 11.338	249
238	Jankhed, XXXI Rajur, XXXI Muramba	36 4 41 36 26 33 107 28 46	4 981727 4 985493 5 191104	95880 96715 135597	18.159 18.317 29.412	250	Rajur, XXXI Malagaon Dumagaon	67 39 50 72 1 40	4 567084 4 413600 4 579700	36005 25018 37993	6.990 4.969 7.196	250

No. of Triangle	Station	Corrected Plane Angle	Distance			No. of Triangle	Station	Corrected Plane Angle	Distance			Theodolite used
			Log. feet	Feet	Miles				Log. feet	Feet	Miles	
251	Rājūr, XXXIX Ahirmal, XXXXII Chauradongar	h.s. 42 44 28 11 18 27 125 57 5	5 222145 4 682897 5 298701	166780 48183 198930	31 587 9 126 37 676	263	Kasner Jāmked, XXXI Pipalgaoon Hill Tree	h.s. 95 20 49 36 16 56	4 911117 4 685159 4 786599	81492 48435 61179	15 434 9 173 11 587	Inch 7 15
252	Jāmked, XXXI Ahirmal, XXXII Chauradongar	h.s. 79 33 26 39 16 52 61 9 42	5 222145 5 030839 5 171805	166780 107371 148558	31 587 20 335 28 136	264	Yerūl, XXX Dhaigaoon, XXXIV Satāra	h.s. 34 27 33 23 31 43	5 057180 4 905701 5 232866	114072 80482 170949	21 605 15 243 32 377	"
253	Rājūr, XXXIX Jāmked, XXXI Pan Chandra Hill Dipmal	46 15 14 22 45 37 16 20 47	5 070735 4 808543 4 903860	120159 64349 98596	22 757 12 187 18 673	265	Yerūl, XXX Dhaigaoon, XXXIV Satāra	h.s. 35 6 53 22 36 25 122 16 42	5 065601 4 890562 5 232866	116306 77725 170949	22 038 14 721 32 377	"
254	Rājūr, XXXIX Jāmked, XXXI Kadgaon Hill Pagoda	9 58 5 16 20 47 9 58 5	5 191104 4 782793 5 191104	135297 60641 135297	29 412 11 485 29 412	266	Yerūl, XXX Satāra Toka	h.s. 85 5 8 34 54 50	5 070438 5 131305 4 890562	117608 135302 77725	22 374 25 625 14 721	"
255	Jāmked, XXXI Muramba Sontāna Hill Dipmal	18 57 21 57 50 55 4 985493	4 508782 4 924815 4 985493	32269 84104 96715	6 112 15 929 18 317	267	Satāra Toka Shernapur	h.s. 16 36 10 80 41 23	5 072669 4 532160 5 070438	118214 34953 117608	22 389 6 450 22 274	"
256	Muramba Jāmked, XXXI Kasner	h.s. 34 19 32 82 37 12 10 6 51	4 786599 5 031780 4 985493	61179 107594 96715	11 587 20 378 18 317	268	Yerūl, XXX Toka Shernapur	h.s. 58 8 55 18 18 40 103 32 25	5 072669 4 640721 5 131305	118214 43724 135302	22 389 8 281 25 625	15 7 "
257	Dhaigaoon, XXXIV Jāmked, XXXI Kasner	h.s. 18 7 8 151 46 1	4 786599 5 034795 5 216964	61179 108342 164803	11 587 20 519 31 213	269	Dhaigaoon, XXXIV Yerūl, XXX Daulatabad Fort Flag-staff	h.s. 7 5 53 51 31 6	4 393466 5 195215 5 232866	24744 156753 170949	4 686 29 688 32 377	15 "
258	Jāmked, XXXI Jadgaon	h.s. 55 19 45 49 10 22	4 803622 4 822785 4 786599	78275 66404 61179	14 825 12 594 11 587	270	Satāra Yerūl, XXX Daulatabad Fort Flag-staff	h.s. 7 22 29 16 24 43	4 393466 4 735910 4 890562	24744 54439 77725	4 686 10 310 14 721	7 15
259	Muramba Jāmked, XXXI Jadgaon	h.s. 52 53 25 27 17 27	4 803622 4 053218 4 985493	78275 45004 96715	14 825 8 523 18 317	271	Yerūl, XXX Shernapur Daulatabad Minaret	h.s. 21 51 5 25 52 35	4 342291 4 411430 4 640721	21093 25789 43724	4 165 4 884 8 281	7
260	Jāmked, XXXI Muramba Jaipur Hill Tree	h.s. 18 28 45 67 32 48	4 487543 4 952300 4 985493	30729 89598 96715	5 820 16 969 18 317	272	Satāra Shernapur Aurangabad Tomb	h.s. 55 54 5 56 29 20	4 484270 4 487252 4 532160	30498 30708 34953	5 776 5 816 6 450	"
261	Jāmked, XXXI Jadgaon Yekterwar Hill Dipmal	h.s. 5 7 33 18 54 40	4 234743 4 794391 4 963022	17169 62282 78275	3 252 11 796 14 825	273	Yerūl, XXX Shernapur Gandali Hill Pagoda No. 1	h.s. 16 23 38 151 39 40	4 775425 5 001214 4 640721	59625 100280 43724	11 293 18 992 8 281	15 7
262	Jatoda Jāmked, XXXI Pipalgaoon Hill Tree	h.s. 10 55 15 11 49 34	4 911117 4 945248 5 220948	81492 88155 166321	15 434 16 696 31 500	274	Dhaigaoon, XXXIV Kasner Varundi	h.s. 82 46 45 83 29 35	4 412916 5 034144 5 034795	25877 108179 108342	4 901 20 489 20 519	"

No. of Triangle	Station	Corrected Plane Angle	Distance			No. of Triangle	Station	Corrected Plane Angle	Distance			Theodolite used
			Log. feet	Feet	Miles				Log. feet	Feet	Miles	
299	Bori Jámked, XXXI Sirádhon Tower	h.s. 15 53 11 18 32 54 4 814560	4 499476 4 564723 4 814560	31585 36705 63247	5 982 6 952 12 357	7 15	Sindhed Rakhsabáhan Sawargon Pagoda	h.s. s. h.s.	4 376984 4 695774 4 752136	23822 49633 56511	4 512 9 400 10 703	Inch 7 "
300	Ambad Jámked, XXXI Sirádhon Tower	h.s. 36 26 28 36 12 42 4 705475	4 499476 4 497110 4 705475	31585 31413 50755	5 982 5 949 9 613	7 15	Jámked, XXXI Sindhed Appagón Pagoda	h.s. h.s. h.s.	4 767396 5 040505 5 218292	58532 109791 105307	11 086 20 794 31 308	15 7
301	Pophla, XXVIII Jámked, XXXI Nandi Hill Peak	7 1 40 129 31 31 5 217497	4 417855 5 217497 5 167637	26173 165005 147108	4 957 31 251 27 861	"	Rakhsabáhan Sindhed Appagón Pagoda	s. h.s. h.s.	4 767396 3 672753 4 752136	58532 4707 56511	11 086 0 891 10 703	"
302	Muramba Jámked, XXXI Nandi Hill Peak	12 33 42 113 57 23 4 985493	4 417855 5 041293 4 985493	26173 109975 96715	4 957 20 829 18 317	7 15	Agargon, XXIV Chincholi, XXIII Netaji	h.s. h.s. h.s.	4 942247 4 947547 5 222223	87548 88623 166810	16 581 16 785 31 593	15 7
303	Jámked, XXXI Bori Ambad Hill Pagoda	6 58 6 30 27 45 4 814560	4 114732 4 735783 4 814560	13024 54423 63247	2 467 10 307 12 357	7	Dhaigon, XXXIV Chincholi, XXIII Netaji	h.s. h.s. h.s.	4 942247 5 107586 5 329950	87548 147091 213772	16 581 27 858 40 487	15 "
304	Bori Ambad Páner Tower	h.s. 59 50 0 55 6 35 4 315417	4 338270 4 315417 4 358948	21791 20674 22853	4 127 3 915 4 328	"	Netaji Dhaigon, XXXIV Chincholi	h.s. h.s. h.s.	4 735148 5 154380 5 167586	51344 142685 147091	10 292 27 024 27 858	7
305	Bori Ambad Rui Pagoda	h.s. 77 58 30 71 46 40 4 358948	4 647113 4 634404 4 358948	44372 43093 22853	8 404 8 162 4 328	"	Agargon, XXIV Dhaigon, XXXIV Chincholi	h.s. h.s. h.s.	4 735148 5 128838 5 227954	51344 131536 169026	10 292 25 480 32 013	15 7
306	Jámked, XXXI Ambad Dundgaon Mosquo	h.s. 50 37 43 73 11 40 4 705475	4 674207 4 707043 4 705475	47229 58485 50755	8 945 11 077 9 613	15 7	Chincholi, XXIII Mathuri, XXXIII Tandoli	h.s. h.s. h.s.	4 713276 5 084788 5 074503	51675 121559 118714	9 787 23 023 22 484	15 "
307	Jámked, XXXI Mathuri, XXXIII Talvada Hill Pagoda	44 15 47 51 47 27 5 177636	5 126174 5 177636 5 279918	133713 150534 190510	25 324 28 510 36 081	15 "	Dhaigon, XXXIV Mathuri, XXXIII Tandoli	h.s. h.s. h.s.	4 713276 5 032690 5 187854	51675 107818 154118	9 787 20 420 29 189	"
308	Jámked, XXXI Mathuri, XXXIII Sindhed	h.s. 19 24 16 57 47 40 5 279918	4 812294 5 218292 5 279918	64907 165307 190510	12 293 31 308 36 081	"	Tandoli Dhaigon, XXXIV Pimpri	h.s. h.s. h.s.	4 408908 5 085772 5 032690	25639 110352 107818	4 856 22 036 20 420	7
309	Jámked, XXXI Mathuri, XXXIII Gevrai Hill Pagoda	24 8 36 58 18 10 5 279918	4 805449 5 213550 5 279918	78605 163512 190510	14 887 30 968 36 081	"	Chincholi Dhaigon, XXXIV Pimpri	h.s. h.s. h.s.	4 408908 4 474884 4 735148	25639 29846 54344	4 856 5 653 10 292	15
310	Mathuri, XXXIII Sindhed Rakhsabáhan	h.s. 92 6 34 47 45 30 4 812294	4 732136 4 942582 4 812294	56511 87616 64907	10 703 16 594 12 293	7	Dhaigon, XXXIV Agargon, XXIV Chincholi Hill Dipmal	h.s. h.s. h.s.	5 126743 4 745075 5 227954	133888 55600 169026	25 358 10 530 32 013	"

NOTE.—Stations Chincholi XXIII and Agargon XXIV appertain to the Bombay Longitudinal Series of the Southern Trigon.

No. of Station	Station	Corrected Plane Angle	Distance			Theodolite used	No. of Triangulation	Station	Corrected Plane Angle	Distance			Theodolite used
			Log. feet	Feet	Miles					Log. feet	Feet	Miles	
323	Chincholi Pimpri Ghirsagon Tower	h.s. s. s.	62 53 45 39 12 12 4 474884	27172 19293 29846	5 146 3 654 5 653	Inch 7 "	335	Tandoli Ranigaon Chandgaon Tower	h.s. " "	53 55 45 95 23 15 4 183272	4 385019 29890 15320	4 596 5 661 2 902	Inch 7 "
324	Dhaigaon, XXXIV Pimpri Simgaon Tower	s. s. s.	38 4 56 68 37 10 4 408908	23060 30964 25939	4 367 7 001 4 856	15 7 "	336	Dhaigaon, XXXIV Agargaon, XXIV Adhori Hill Pagoda No. 1	h.s. s. s.	82 42 47 35 27 39 5 042660	190193 111240 169030	36 022 21 068 32 013	15 7 "
325	Dhaigaon, XXXIV Pimpri Karegaon Tower	s. s. s.	91 53 56 36 21 20 4 408908	32033 19355 25939	6 180 3 666 4 856	15 7 "	337	Mathuri, XXXIII Agargaon, XXIV Adhori Hill Pagoda No. 1	h.s. s. s.	51 11 34 10 7 8 5 330639	190195 42881 214111	36 022 8 121 40 551	" " "
326	Dhaigaon, XXXIV Chincholi Savita Tower Tree	h.s. s. s.	141 52 4 7 44 50 4 735148	66341 14483 54344	12 565 2 743 10 292	15 7 "	338	Mathuri, XXXIII Agargaon, XXIV Adhori Hill Pagoda No. 2	h.s. s. s.	51 16 10 10 6 41 5 330639	190274 42822 214111	36 037 8 110 40 551	" " "
327	Dhaigaon, XXXIV Pimpri Nimgaon Tower	s. s. s.	44 10 37 45 26 15 4 408908	17868 18268 25939	3 384 3 460 4 856	15 7 "	339	Dhaigaon, XXXIV Agargaon, XXIV Adhori Hill Pagoda No. 2	h.s. s. s.	82 44 34 35 28 6 5 227954	190274 111299 169036	36 037 21 079 32 013	15 7 "
328	Dhaigaon, XXXIV Pimpri Joharapur Tower	s. s. s.	61 41 49 86 23 10 4 408908	42999 48400 25939	8 087 9 167 4 856	15 7 "	340	Mathuri, XXXIII Sindkhed Pipla Hill Pagoda	h.s. s. s.	13 17 0 11 37 10 4 812294	35417 31046 64907	6 708 5 880 12 293	7 7 "
329	Dhaigaon, XXXIV Mathuri, XXXIII Ranigaon	h.s. s. s.	3 0 43 8 30 40 5 187854	40338 114184 154118	7 678 21 626 29 189	15 " "	341	Mathuri, XXXIII Sindkhed Kolegaon Hill Tree	h.s. s. s.	20 53 54 24 4 25 4 812294	32760 37462 64907	6 205 7 005 12 293	15 7 "
330	Chincholi, XXXIII Mathuri, XXXIII Ranigaon	h.s. s. s.	18 25 3 93 24 54 5 107263	40338 128015 118714	7 678 24 245 22 484	" " "	342	Sindkhed Khamkhed Hill Pagoda	h.s. s. s.	88 43 29 38 16 44 4 812294	81256 50350 64907	15 389 9 530 12 293	15 7 "
331	Tandoli Ranigaon Nimgaon Pagoda	h.s. s. s.	113 0 45 48 43 45 4 185272	45008 36753 15320	8 524 6 961 2 902	7 " "	343	Chincholi, XXXIII Mathuri, XXXIII Khamkhed Hill Pagoda	h.s. s. s.	29 6 39 105 35 30 5 074503	81256 160842 118714	15 389 30 469 22 484	7 15 "
332	Nofai Tandoli Somatna	h.s. s. s.	22 45 30 35 39 0 121 35 30	43887 66122 90036	8 312 12 523 18 302	" " "	344	Mathuri, XXXIII Sindkhed Shernpur Hill Pagoda	h.s. s. s.	74 56 55 39 39 0 4 812294	68937 45551 64907	13 056 8 627 12 293	7 7 "
333	Tandoli Ranigaon Antarali Pagoda	h.s. s. s.	35 38 30 60 48 0 4 185272	8984 13459 15320	1 701 2 549 2 902	" " "	345	Ranigaon Mathuri, XXXIII Bhalgaon Hill Pagoda	h.s. s. s.	30 52 7 110 24 4 4 607864	32433 60729 40538	6 296 11 502 7 678	" 15 "
334	Tandoli Ranigaon Hagaon Tower	h.s. s. s.	42 1 30 124 31 30 4 185272	44095 54266 15320	2 8351 10 278 2 902	" " "	346	Chincholi, XXXIII Mathuri, XXXIII Bhalgaon Hill Pagoda	h.s. s. s.	6 12 43 16 31 10 5 074503	32433 37356 118714	6 296 16 535 22 484	" " "

* Deduced base.

No. of Triangle	Station	Corrected Plane Angle	Distance			No. of Triangle	Station	Corrected Plane Angle	Distance			Theodolite used
			Log. feet	Feet	Miles				Log. feet	Feet	Miles	
347	Mathuri, XXXIII Ranigaon Pargaoon Tower	h.s. 20 0 32 23 19 30	4° 30' 56" 19	20212	3° 32' 8"	15	Chincholi, XXIII Mathuri, XXXIII Tarkha	h.s. 55 1 59 35 17 38 89 40 23	4° 08' 80" 50	97286	18° 42' 5"	14
			4° 36' 00" 18	23389	4° 43' 0"	7			4° 83' 62" 05	68591	12° 99' 1"	"
			4° 60' 78" 64	40338	7° 67' 8"				5° 07' 45" 03	118714	22° 48' 4"	"
348	Mathuri, XXXIII Chincholi, XXIII Kharvandi Hill Peak	h.s. 64 6 35 17 32 40	5° 03' 31" 91	107042	20° 44' 4"	15	Dhaigaon, XXXIV Mathuri, XXXIII Tarkha	h.s. 37 37 35 67 5 56 75 16 29	4° 98' 80" 50	97286	18° 42' 5"	"
			4° 55' 83" 35	36169	6° 83' 0"	"			5° 166' 70" 1	146791	27° 80' 1"	"
			5° 07' 45" 03	118714	22° 48' 4"				5° 187' 85" 4	154118	29° 18' 9"	"
349	Mathuri, XXXIII Ranigaon Hukarda Pagoda	h.s. 88 49 27 29 39 40	4° 66' 38" 13	46112	8° 73' 3"	"	Chincholi, XXIII Agargaon, XXIV Netaji Hill	18 18 56 18 5 54	4° 945' 99" 4	88307	16° 72' 5"	15
			4° 35' 89" 5	22824	4° 32' 3"	7			4° 940' 98" 8	87295	16° 53' 3"	"
			4° 60' 78" 64	40338	7° 67' 8"				5° 222' 22" 3	166810	31° 59' 3"	"

NOTE.—Stations Chincholi XXIII and Agargaon XXIV appertain to the Bombay Longitudinal Series of the Southern Trigon.

December, 1892.

J. ECCLES,
In charge of Computing Office.

KHANPISURA MERIDIONAL SERIES.

AZIMUTHS OF SURROUNDING STATIONS AND POINTS AT PRINCIPAL,
PRINCIPAL-AUXILIARY AND SECONDARY STATIONS.

The following table contains, in the first column, the name of each Principal, Principal-Auxiliary, or Secondary Station, at which azimuths of surrounding Points have been measured; immediately followed by those azimuths. The second column contains the number of the triangle which gives the distance between the Station and the Point.

Name of Station with Azimuths of surrounding Points	No. of Triangle giving Distance	Name of Station with Azimuths of surrounding Points	No. of Triangle giving Distance
Āgargaon, XXIV	o / "	Ambad h.s.	o / "
Chincholi Hill Dipmal	208 0 19	Mathuri, XXXIII	33 14 26
Chincholi	h.s. 208 27 54	Dundgaon Mosquo	55 23 51
Dhaigaon, XXXIV	224 28 23.77	Jámkhed, XXXI	128 35 31
Adhuri Hill Pagoda No. 1	259 56 3	Sirádñön Tower	165 1 59
Adhuri Hill Pagoda No. 2	259 56 30	Pokri Tower	179 30 23
Mathuri, XXXIII	270 3 10.74	Pärner Tower	193 27 9
Netjai	" 284 53 43	Gola Pagoda	204 30 24
Netjai Hill	285 26 25	Jálma Pagoda	205 35 3
Chincholi, XXIII	303 32 19.36	Jálma Hill Pagoda	209 58 26
		Shirga Tower	213 14 4
		Rauggaon Hill Pagoda	216 7 51
		Vadgaon Hill Pagoda	221 31 27
		Kálgaon Pagoda	230 4 19
		Bori	h.s. 248 33 44
		Rui Pagoda	320 20 24
Āhirmal, XXXII		Ambáh h.s.	
Mathuri, XXXIII	55 39 41.98	Singárehori, XV	48 36 3
Jámkhed, XXXI	107 19 6.82	Mhow Church	92 39 20
Chauradongar	h.s. 146 35 59	Harnása, XII	130 25 31
Rájur, XXIX	157 54 25.66		
Ājnád, XXII		Anakvádi, XXV.	
Laling Hill Temple	29 32 0	Songir	h.s. 196 0 25
Anakvádi, XXV	31 41 42.21	Ājnád, XXII	211 34 12.76
Varjári Hill	132 2 54	Dhár	" 227 7 29
Bábákuvar, XX	156 50 34.95	Laling Hill Temple	" 237 13 0
Jalálabad, XIX	222 46 25.98	Bahádurpur	" 247 38 22
Tasdin Hill Temple No. 1	237 30 40	Kaukráj	" 248 11 59
Tasdin Hill Temple No. 2	237 31 30	Valvádi, XXIII	" 275 14 9.36
Ārgaon, XXI	270 40 21.23	Junvána Hill Peak	277 55 50
Dhanvár, XXIV	309 15 32.56		
Valvádi, XXIII	346 48 57.60		

NOTE.—Stations Chincholi XXIII and Āgargaon XXIV appertain to the Bombay Longitudinal Series.

Name of Station with Azimuths of surrounding Points	No. of Triangle giving Distance	Name of Station with Azimuths of surrounding Points	No. of Triangle giving Distance
Anakvādi, XXV—(Contd.)		Bargar h.s.	
Arvi Peak 292 43 4	172	Dhamnār, II 197 50 49	68
Sātmāla, XXVII 317 52 49.16	35	Nigrun, III 246 7 16	68
		Lohāri, VI 317 16 23	69
Anjar h.s.		Bāwangaz, XVIII	
Abapuri Hill Pagoda	183	Bori Hill Peak 4 16 52	136
Chakeri S. 255 53 13	133	Gumānpur, XVI 181 56 22.77	22
		Vatli h.s. 198 10 13	120
Ārgaon, XXI		Mograba, XIV 228 0 38.57	22
Valvādi, XXIII 29 35 15.23	30	Songarh Peak 234 53 5	126
Ajuād, XXII 90 50 55.04	28	Chakeri S. 255 40 1	131
Khandra Hill 98 42 53	140	Thikri, XVII 266 51 42.71	23
Bābākuvar, XX 116 33 19.78	29	Abapuri Hill Pagoda 301 19 22	132
Tasdin Hill Temple No. 2 149 26 48	144	Jalālabad, XIX 301 22 44.22	24
Tasdin Hill Temple No. 1 149 28 57	142	Ambāhpani Hill Temple 321 15 24	134
Jalālabad, XIX 162 25 19.85	28	Bābākuvar, XX 351 49 29.07	25
Sātpuda Hill Peak 264 11 2	145	Naktimāta Peak 356 33 59	137
Dhanvār, XXIV 350 43 55.64	31		
Bābākuvar, XX		Bori h.s.	
Varjāri Hill 2 46 5	139	Mathuri, XXXIII h.s. 37 5 13	283
Bori Hill Peak 160 17 9	136	Ambad 68 34 59	284
Naktimāta Peak 166 25 44	137	Ambad Hill Pagoda 80 29 13	303
Bāwangaz, XVIII 171 50 50.60	25	Jāmkhed, XXXI 110 56 58	283
Thikri, XVII 227 32 28.29	26	Sirādhōn Tower 126 50 9	299
Jalālabad, XIX 259 28 47.50	25	Pārner Tower 128 24 59	304
Tasdin Hill Temple No. 1 278 56 53	141	Pokri Tower 138 38 20	298
Ārgaon, XXI 296 19 54.05	29	Shivga Tower 181 11 24	296
Khandra Hill 316 59 21	140	Gola Pagoda 181 46 54	295
Ajuād, XXII 336 47 46.96	27	Jālma Pagoda 195 48 5	287
		Jālma Hill Pagoda 201 34 22	289
Bahādurpur h.s.		Raugaon Hill Pagoda 205 23 9	291
Anakvādi, XXV 67 45 12	168	Kālāgnon Pagoda 220 31 39	286
Lāling Hill Temple 69 37 54	167	Kui Pagoda 350 36 29	305
Valvādi, XXIII 316 28 47	167		
Bālāgara, XXIV		Būda, XXI	
Barkhera Hill Bush 4 13 49	49	Bālāgara, XXIV 68 14 49.77	1
Būda, XXI 248 10 32.62	1	Sitāmau, I 318 22 31.33	2
Sitāmau, I 292 1 43.09	3	Dhamnār, II 357 46 23.46	1
Digau h.s. 299 37 52	51		
Dhamnār, II 328 28 15.62	1	Budapura h.s.	
		Lohāri, VI 216 53 45	82
Baloda s.		Kaula-ka-Māta, XI 313 28 56	82
Semlia S. 23 15 45	93	Chakeri s.	
Jalodia h.s. 59 58 3	98	Abapuri Hill Pagoda 10 25 25	132
Kaula-ka-Māta, XI 141 46 17	91	Bāwangaz, XVIII 75 45 15	131
Karsod, IX 229 16 38	91	Anjar h.s. 75 53 55	133
Kwāla S. 299 39 33	92	Songarh Peak 223 15 15	131
Nagora " 341 29 57	95		
Bāmbrud h.s.		Chaoradongar h.s.	
Varod h.s. 219 14 39	177	Jāmkhed, XXXI 27 40 16	252
Pāchora " 242 46 49	177	Rājūr, XXIX 200 33 29	251
		Āhirmal, XXXII 326 30 34	251

NOTE.—Stations Būda XXI and Bālāgara XXIV appertain to the Karachi Longitudinal Series.

Name of Station with Azimuths of surrounding Points	No. of Triangle giving Distance	Name of Station with Azimuths of surrounding Points	No. of Triangle giving Distance
Chincholi, XXIII		Dhaigaon, XXXIV—(Contd.)	
Agargaon, XXIV	123 40 12' 16"	Agargaon, XXIV	44 35 13' 84"
Netjai Hill	141 59 8	Pimpri	75 4 12
Netjai	h.s. 142 33 4	Chincholi Hill Dipmal	87 38 15
Tarkha	" 164 19 28	Chincholi	h.s. 87 38 40
Dhaigaon, XXXIV	174 35 46' 60"	Siragaon Tower	113 9 8
Tandoli	" 194 33 19	Karegaon Tower	166 58 8
Ranigaon	" 200 56 24	Yerul, XXX	173 3 3' 58"
Khurvandi Hill Peak	201 48 47	Yerul Hill Tree	173 11 19
Mathuri, XXXIII	219 21 27' 27"	Daulatabad Fort Flag-staff	180 8 57
Bhalgaon Hill Pagoda	225 34 10	Mitmita Peak	186 55 40
Khankhed Hill Pagoda	248 28 6	Satara	No. 2 " 195 39 29
		Satara	No. 1 " 196 34 47
		Varundi	" 224 36 43
		Sovatta Tower Tree	" 229 30 44
		Parundi Hill Pagoda	237 39 17
		Kasaner	" 238 20 23
		Jamkhed, XXXI	248 27 13' 89"
		Mathuri, XXXIII	321 43 47' 73"
		Adhuri Hill Pagoda No. 2	321 50 40
		Adhuri Hill Pagoda No. 1	321 52 27
		Ranigaon	" 324 44 31
		Tandoli	" 331 56 33
		Chincholi, XXIII	354 34 37' 31"
		Tarkha	" 359 21 23
Chincholi h.s.		Dhalmu h.s.	
Agargaon, XXIV	28 31 34	Gurda, VIII	107 16 2
Ghoregaon Tower	215 28 30	Jalalkheri, X	338 19 31
Sovatta Tower Tree	259 50 40		
Dhaigaon, XXXIV	267 35 30		
Pimpri	s. 278 22 15		
Netjai	h.s. 351 23 6		
Damangaon s.			
Rajur, XXIX	No. 1 h.s. 204 24 10		
Malagaon	276 25 50		
Deo Dongri, V		Dhamnar, II	
Dhanora, VII	56 50 22' 80"	Lohari, VI	9 28 11' 57"
Jhar Hill Tree	62 13 37	Bargar	h.s. 17 53 4
Parnaji Pagoda No. 2	104 19 35	Bhatkheri Hill Tree	21 44 9
Parnaji Pagoda No. 1	104 23 32	Pingra Hill Pagoda	35 51 8
Parnakheri	h.s. 107 0 13	Kachner Hill Tree	52 1 18
Lohari, VI	108 35 28' 39"	Barkhera Hill Bush	145 10 48
Nigrun, III	160 40 21' 11"	Balagora, XXIV	148 32 52' 57"
Kantharia Hill Tree	180 33 3	Bada, XXI	177 46 45' 02"
Patan	" 181 49 54	Digau	" 187 1 44
Dharakpur Hill Tree	208 22 48	Sitaman, I	228 36 51' 70"
Dudbala, IV	209 14 30' 90"	Sitaman Hill Tree	236 35 36
Melndpur Flag-staff	244 40 12	Nigrun, III	296 50 40' 79"
Mehidpur	s. 248 57 32		
Dulet Temple	250 42 58		
Mehidpur Tomb	252 24 14		
Karni Pagoda	265 43 19		
Karni	h.s. 271 31 11		
Gurda, VIII	354 59 9' 98"		
Deoguraria h.s.		Dhanora, VII	
Singarchori, XV	42 52 31	Kaula-ka-Mata, XI	28 43 19' 99"
Harnasa, XII	109 13 22	Jhar Hill Tree	112 21 0
Indore Pagoda	123 56 36	Lohari, VI	154 45 59' 49"
Renti	h.s. 148 15 57	Deo Dongri, V	236 43 37' 71"
Dewas Hill Temple	201 26 42	Gurda, VIII	266 8 24' 59"
Nagda Hill	204 4 32	Karsod, IX	315 1 41' 93"
Guraria Hill Peak	264 22 47		
Dhaigaon, XXXIV		Dhanvar, XXIV	
Netjai	h.s. 12 59 11	Jarandi Hill Pagoda	8 8 59
Johrapur Tower	13 22 23	Sirsala, XXVI	11 16 10' 85"
Nimbgaon Tower	30 55 35	Varad	h.s. 30 55 30
		Mohari	" 36 48 45
		Mohari Hill Peak	40 25 25
		Bambrud Hill Pagoda	45 31 30

NOTE.—Stations Chincholi XXIII and Agargaon XXIV appertain to the Bombay Longitudinal Series.
Stations Bada XXI and Balagora XXIV appertain to the Karachi Longitudinal Series.

Name of Station with Azimuths of surrounding Points	No. of Triangle giving Distance	Name of Station with Azimuths of surrounding Points	No. of Triangle giving Distance
Dhanvár, XXIV—(Contd.)		Gumánpur, XVI	
Páchora h.s. 51 53 30	174	Ambáhpáni Hill Temple 0 17 59	135
Sámner " 58 8 50	154	Báwangaz, XVIII 1 56 52 19	22
Valvádi, XXIII " 69 56 4 78	31	Indráwan, XIII 230 39 0 30	21
Jalka Peak " 81 51 59	150	Kapátal h.s. 249 57 55	96
Padmála " 85 29 9	149	Dhutni Peak 291 24 1	123
Páldhi " 129 26 36	147	Lálgarh Hill Pagoda 293 36 22	121
Ajnád, XXII 129 27 35 65	32	Mograba, XIV 295 57 21 87	21
Argaon, XXI 170 45 30 91	31		
Manvel s. 181 31 54	148	Gurla, VIII	
Sátputa Hill Peak 184 15 33	146	Karsod, IX 32 17 51 38	11
Dohori h.s. 280 45 13	151	Bereha Hill Tree 79 20 47	85
Jámner Hill Peak 296 29 56	153	Dhanora, VII 86 15 29 14	10
Kekatnimbhora " 304 0 47	152	Deo Dongri, V 174 59 30 77	10
Jaola Hill Peak 322 19 12	190	Karai h.s. 207 23 52	74
		Dhalmu " 287 13 22	87
Dhár h.s.		Jalálkheri, X 310 13 21 71	14
Laling Hill Temple 45 55 53	164	Lupára " 354 28 27	88
Anakvádi, XXV 47 14 41	165		
Kankráj h.s. 345 42 27	164	Harnása, XII	
		Nálchha Hill Dargah 19 18 38	125
Digau h.s.		Mograba, XIV 27 42 35 17	18
Dhamnár, II 7 2 18	50	Dhár Hill Pagoda No. 1 52 13 41	118
Bálágara, XXIV 119 43 3	51	Indráwan, XIII 93 42 39 67	17
Sítamau, I 280 27 12	50	Kwála s. 135 16 5	89
		Karsod, IX 160 25 39 51	15
Dohori h.s.		Jalálkheri, X 199 44 26 97	15
Sirsála, XXVI 30 35 33	151	Reuti h.s. 266 47 25	100
Dhanvár, XXIV 100 48 18	151	Nenod Hill Tree 282 44 35	101
		Deogurária " 289 4 34	102
Dudhála, IV		Rála Mandíl Hill Peak 292 58 57	108
Deo Dongri, V 29 20 24 24	6	Maehla Hill Peak 302 42 27	109
Nigrun, III 76 24 59 44	5	Maehla Hill Temple 304 32 31	111
Tarauli h.s. 107 18 3	57	Ambáh " 310 18 40	112
Párlia " 109 33 57	53	Singárchori, XV 343 26 0 80	19
Sítamau, I 114 23 4 08	5		
Gualled Hill Tree 147 7 43	55	Indráwan, XIII	
		Kapátal h.s. 28 31 56	96
Ghátumbri h.s.		Gumánpur, XVI 50 46 6 38	21
Pophla, XXVIII 12 38 28	184	Shergarh s. 138 43 55	97
Sirsála, XXVI 78 46 38	185	Jalodia h.s. 164 37 9	99
Ausa Hill Fort 182 3 23	186	Kaula-ka-Máta, XI 177 39 15 00	16
Baitalvádi Fort 223 3 3	189	Semlia s. 210 31 28	94
Rájur, XXIX 330 11 5	184	Karsod, IX 217 19 2 10	16
		Nagora " 265 25 24	94
Golagaon, h.s.		Harnása, XII 273 34 2 85	17
Yorúl, XXX 70 56 21	225	Mograba, XIV 343 36 26 99	18
Róza h.s. 83 41 4	233		
Guddana Hill Pagoda 131 16 41	226	Jadgaon h.s.	
Pophla, XXVIII 264 16 27	225	Kasaner h.s. 11 10 36	258
		Muramba " 222 11 6	259
Gosainbaira h.s.		Yeklerwar Hill Dipmal 303 5 34	261
Thikri, XVII 44 26 18	130	Jámkhed, XXXI 322 0 14	258
Singárchori, XV 209 22 19	130		
		Jakálabad, XIX	
		Tasdin Hill Temple No. 2 3 25 33	143
		Ajnád, XXII 42 54 20 12	27
		Bábákuvar, XX 79 39 33 91	25

NOTE.—Station Bálágara XXIV appertains to the Karáchi Longitudinal Series.

Name of Station with Azimuths of surrounding Points	No. of Triangle giving Distance	Name of Station with Azimuths of surrounding Points	No. of Triangle giving Distance
Jalálabad, XIX—(Contd.)		Jámkhed, XXXI—(Contd.)	
Bijgarh Hill Fort	99 55 29	Raunaon Hill Pagoda	247 57 37
Bawangaz, XVIII	121 34 57 95	Vadagaon Hill Pagoda	252 3 31
Thikri, XVII	181 50 19 33	Pokri Tower	268 16 37
Sátputa Hill Peak	328 38 54	Sirádhon Tower	272 20 30
Árgaon, XXI	342 22 34 98	Nandi Hill Peak	283 17 54
		Abirmal, XXXII	287 10 48 55
		Bori	h.s. 290 53 24
Jalálkheri, X		Ambad Hill Pagoda	297 51 30
Harnása, XII	19 47 56 92	Ambad	308 53 12
Karsod, IX	75 56 21 10	Talváda Hill Pagoda	333 33 25
Lupára	h.s. 104 46 3	Gerrái Hill Pagoda	353 40 36
Gurla, VIII	130 16 54 13	Sindkhed	358 24 56
Dhalma	158 20 23	Dundgaon Mosque	359 10 55
Jalodia h.s.		Jatoda h.s.	
Shergarh	s. 8 18 34	Yerál, XXX	82 5 0
Kaula-ka-Máta, XI	184 53 50	Jámkhed, XXXI	314 42 52
Baloda	239 54 56	Pipálgaon Hill Tree	325 38 7
Indráwan, XIII	344 36 23		
		Kanad h.s.	
Jamdi h.s.		Jamdi	h.s. 95 19 40
Mundvádi Peak	159 41 31	Mundrádi Peak	117 34 20
Sátmála, XXVII	217 36 3	Andaner Masjid	149 19 20
Andaner Peak	241 45 41	Andaner Peak	171 16 32
Andaner Masjid	241 55 6	Sátmála, XXVII	179 8 32
Kanad	h.s. 275 18 6		
Damangaon Hill Pagoda	297 48 58	Kankráj h.s.	
Yerál, XXX	340 10 16	Anakvádi, XXV	68 20 4
		Laling Hill Temple	69 58 17
		Dhár	h.s. 165 43 20
		Valvádi, XXIII	330 48 13
Jámkhed, XXXI			
Appagaon Pagoda	6 18 33	Kapátal h.s.	
Mathuri, XXXIII	17 49 11 69	Gumánpur, XVI	70 2 50
Dhaigaon, XXXIV	68 36 11 85	Shergarh	h.s. 192 52 9
Kasaver	h.s. 86 43 20	Indráwan, XIII	208 29 45
Parundi Hill Pagoda	92 0 36		
Yerál, XXX	122 15 33 99	Karai h.s.	
Yerál Hill Tree	122 17 48	Gurla, VIII	27 25 53
Pipálgaon Hill Tree	123 0 16	Deo Dongri, V	91 33 33
Rasulpur	127 3 2	Dulet Temple	163 34 5
Godagaon Hill Peak	132 25 42	Mehidpur Flag-staff	195 30 43
Jatoda Hill Tree	134 41 31	Mehidpur	h.s. 201 44 33
Jatoda	134 49 50	Mehidpur Tomb	210 8 18
Jadgaon	142 3 5		
Yeklerwar Hill Dipmal	147 10 38	Karsod, IX	
Jáipur Hill Tree	150 51 47	Kwála	h.s. 8 21 28
Pophla, XXVIII	153 46 23 14	Indráwan, XIII	37 24 48 90
Muramba	169 20 32	Baloda	49 20 5
Nandkhed Hill Tomb	173 46 44	Kaula-ka-Máta, XI	94 6 56 28
Sountána Hill Dipmal	188 17 53	Bercha Hill Tree	123 36 52
Rohillagad Hill Peak	199 56 52	Dhanora, VII	135 5 50 11
Rájur, XXIX	205 25 12 55	Gurla, VIII	212 14 56 50
Chauradongar	207 37 23	Jalálkheri, X	255 49 55 00
Kadgaon Hill Pagoda	215 23 18	Harnása, XII	340 22 46 12
Mátigaon	219 27 42		
Pan Chandra Hill Dipmal	228 10 50		
Jálma Pagoda	233 55 56		
Jálma Hill Pagoda	235 9 29		

Name of Station with Azimuths of surrounding Points	No. of Triangle giving Distance	Name of Station with Azimuths of surrounding Points	No. of Triangle giving Distance
Kasaner h.s.		Lohári, VI—(Contd.)	
Dhaigaon, XXXIV	58 25 46	Parnaji Pagoda No. 1	293 53 51
Gedaida Dipmal	96 39 1	Parnaji Pagoda No. 2	294 1 1
Dhánura Pagoda	100 48 1	Dhanora, VII	334 42 14.23
Bhir Kingaon Pagoda	102 15 46	Kaula-ka-Máta, XI	351 41 36.72
Parola Idgah	105 30 31		
Walauj Pagoda	119 7 21		
Varundi h.s.	141 12 31		
Pipalgaon Hill Tree	171 18 56	Lupára h.s.	
Jadgaon	191 9 52	Gurla, VIII	174 28 39
Muramba	203 36 29	Jalálkheri, X	284 42 43
Rohillagad Hill Peak	259 59 50		
Jámkhed, XXXI	266 39 45		
		Málagaon No. 1 h.s.	
Kaula-ka-Máta, XI		Jámkhed, XXXI	39 33 12
Jalodia h.s.	4 54 15	Muramba h.s.	81 5 36
Budapura	133 35 4	Damangaon s.	96 28 2
Pancher Hill Pagoda	156 33 5	Rájur, XXIX	136 55 32
Lohári, VI	171 43 18.72	Málagaon No. 2 h.s.	260 28 34
Jhar Hill Tree	195 24 36		
Bercha Hill Tree	207 16 12	Málagaon No. 2 h.s.	
Dhanora, VII	208 41 18.15	Málagaon No. 1 h.s.	80 28 43
Karsod, IX	274 0 47.40	Rájur, XXIX	133 58 43
Kwála s.	312 20 47	Dongaon Hill Dipmal	187 5 3
Baloda	321 43 35	Wadona Peak	221 11 13
Semlia	343 54 40		
Indráwan, XIII	357 38 55.30		
		Kekatnimbhora h.s.	
Kekatnimbhora h.s.		Sirsála, XXVI	28 11 44
Sirsála, XXVI	28 11 44	Dhanvár, XXIV	124 2 57
Dhanvár, XXIV	124 2 57	Jámner Hill Peak	286 12 2
Jámner Hill Peak	286 12 2		
		Kulah h.s.	
Kulah h.s.		Sirsála, XXVI	22 27 36
Sirsála, XXVI	22 27 36	Antúr Hill Fort	56 32 39
Antúr Hill Fort	56 32 39	Savangi h.s.	131 17 32
Savangi	131 17 32		
		Kwála s.	
Kwála s.		Baloda s.	119 42 20
Baloda	119 42 20	Kaula-ka-Máta, XI	132 26 16
Kaula-ka-Máta, XI	132 26 16	Karsod, IX	188 20 48
Karsod, IX	188 20 48	Harnása, XII	315 12 31
Harnása, XII	315 12 31		
		Lohári, VI	
Lohári, VI		Pancher Hill Pagoda	25 2 21
Pancher Hill Pagoda	25 2 21	Budapura h.s.	36 58 11
Budapura	36 58 11	Bargar	137 17 20
Bargar	137 17 20	Bhátkheri Hill Tree	158 51 21
Bhátkheri Hill Tree	158 51 21	Bhátkheri Hill Pagoda	160 16 3
Bhátkheri Hill Pagoda	160 16 3	Kachner Hill Tree	180 38 20
Kachner Hill Tree	180 38 20	Dhamná, II	189 26 51.11
Dhamná, II	189 26 51.11	Nigrun, III	237 56 10.00
Nigrun, III	237 56 10.00	Deo Dongri, V	288 24 54.74
Deo Dongri, V	288 24 54.74	Parnakheri	290 33 49
Parnakheri	290 33 49		
		Mathuri, XXXIII	
		Bhálgaon Hill Pagoda	22 54 34
		Chincholi, XXIII	39 25 43.64
		Hukarda Pagoda	44 29 11
		Tarkha h.s.	74 43 22
		Ágargaon, XXIV	90 15 24.58
		Kharvándi Hill Peak	103 32 19
		Párgaon Tower	113 18 6
		Tandoli	120 6 37
		Ránigaon	133 18 38
		Adhori Hill Pagoda No. 1	141 26 59
		Adhori Hill Pagoda No. 2	141 31 35
		Dhaigaon, XXXIV	141 49 17.62
		Jámkhed, XXXI	197 45 49.38
		Ambad	213 8 44
		Rakshasbáhan s.	215 25 33
		Bori h.s.	216 58 16
		Áhirmal, XXXII	235 28 8.10
		Talváda Hill Pagoda	249 33 16
		Sindkhed	255 33 29
		Gevrái Hill Pagoda	256 3 59
		Pipla Hill Pagoda	268 50 29
		Kolegaon Hill Tree	276 27 23
		Khámkhed Hill Pagoda	293 50 13
		Sherapur Hill Pagoda	330 30 24

NOTE.—Stations Chincholi XXIII and Ágargaon XXIV appertain to the Bombay Longitudinal Series.

Name of Station with Azimuths of surrounding Points	No. of Triangle giving Distance	Name of Station with Azimuths of surrounding Points	No. of Triangle giving Distance
Mehidpur s.		Nagora s.	
Karai Pagoda	16 13 2	Indráwan, XIII	85 29 12
Karai	h.s. 21 45 1	Semlia	s. 128 28 59
Dulet Temple	63 53 30	Baloda	" 161 31 23
Deo Dongri, V	69 0 22		
Mhow Church s.		Netjai h.s.	
Singárehori, XV	28 25 20	Agargaon, XXIV	104 58 36
Machla Hill Peak	230 48 33	Chincholi	h.s. 171 24 25
Ambáh	h.s. 272 37 16	Dhánigaon, XXXIV	192 57 20
Dhájara Hill Peak	338 53 0	Somlána	s. 217 18 14
		Tandoli	h.s. 240 3 44
		Chincholi, XXIII	322 30 3
Moda h.s.		Nigrun, III	
Palsi	h.s. 46 41 8	Pannakheri	h.s. 26 30 12
Upli Pagoda	83 41 28	Lohári, VI	58 3 51.48
Sirsála, XXVI	148 10 18	Bargar	" 66 15 54
Sarola	" 240 33 54	Bháttkheri Hill Tree	" 74 15 56
		Bháttkheri Hill Pagoda	75 12 33
Mograha, XIV		Pingrála Hill Pagoda	93 56 55
Ambálpáni Hill Temple	45 32 49	Dhamnár, II	116 57 4.33
Báwangaz, XVIII	48 11 11.63	Sítamau, I	164 3 19.59
Vatli	h.s. 111 3 34	Párlia	" 218 36 35
Gumánpur, XVI	116 7 33.26	Tarauli	" 228 31 20
Lálgach Hill Pagoda	117 39 49	Gualad Hill Tree	233 27 56
Indráwan, XIII	163 39 37.09	Dudhála, IV	256 16 6.69
Dhutni Peak	182 15 35	Dharakpur Hill Tree	257 23 51
Havnása, XII	207 37 13.03	Pátan	" 293 19 49
Asakhori Hill Tree	234 43 5	Kanthária Hill Tree	307 18 48
Machla Hill Peak	243 25 12	Deo Dongri, V	340 37 25.36
Nálehla Hill Dargah	249 6 54		
Jánapur Hill Pagoda	256 44 29	Páchora h.s.	
Singárehori, XV	264 22 2.41	Sátamála, XXVII	29 51 15
Jánania Hill Peak	300 52 48	Bámbrud	h.s. 62 51 50
Thikri, XVII	346 21 49.56	Varod	" 104 9 30
		Dhanvár, XXIV	231 47 56
		Savangi	" 263 9 16
		Sirsála, XXVI	318 3 19
Mohári h.s.		Padmála h.s.	
Varod	h.s. 86 17 53	Dhanvár, XXIV	265 24 47
Valvádi, XXIII	91 48 7	Sirsála, XXVI	342 39 47
Dhanvár, XXIV	216 46 10		
Sirsála, XXVI	351 1 33	Páldhi h.s.	
		Manvel	s. 216 35 30
Muramba h.s.		Dhanvár, XXIV	309 23 52
Parundi Hill Pagoda	21 39 19	Sirsála, XXVI	354 52 32
Kasauer	h.s. 23 38 58		
Jadgaon	" 42 12 51	Palsi h.s.	
Jaipur Hill Tree	56 52 14	Upli Pagoda	147 56 32
Kankura Hill Tree	101 44 40	Sindphal Hill Pagoda	166 14 21
Pophla, XXVIII	128 3 30	Sirsála, XXVI	171 37 14
Nandkhed Hill Tomb	184 57 41	Undangaon Hill Tree	206 6 46
Rájur, XXIX	241 50 40	Moda	h.s. 226 39 37
Rájur Hill Temple	241 53 20	Sarola	" 233 56 40
Málagaoon	No. 1 " 260 59 0		
Somlána Hill Dipmal	291 28 31		
Vádagaon Hill Pagoda	299 42 28		
Nandi Hill Peak	336 45 44		
Jámkhed, XXXI	349 19 26		

NOTE.—Stations Chincholi XXIII and Agargaon XXIV appertain to the Bombay Longitudinal Series.

Name of Station with Azimuths of surrounding Points	No. of Triangle giving Distance	Name of Station with Azimuths of surrounding Points	No. of Triangle giving Distance
Palsi h.s.—(Contd.)		Rail h.s.	
Sillöd s. 250 11 21	204	Sátmaia, XXVII 206 21 17	211
Rájur, XXIX 306 30 7	197	Pophla, XXVIII 297 45 20	210
Nirud Tower 311 32 41	208	Yerúl, XXX 343 31 48	210
Párlia h.s.		Rájur, XXIX	
Nigrun, III 38 39 54	53	Kadgaon Hill Pagoda 9 8 23	254
Sitamaui, I 118 58 29	54	Chaoradongar h.s. 20 34 28	251
Dudhála, IV 289 28 24	53	Damangaon s. 24 24 49	250
Parnakheri h.s.		Jámkhod, XXXI 25 29 10.23	39
Lohári, VI 110 38 16	71	Muramba h.s. 61 55 43	238
Nigrun, III 206 26 58	70	Nandkhed Hill Tomb 85 14 51	241
Deo Dongri, V 286 54 3	70	Pophla, XXVIII 86 27 37.50	38
Pátan h.s.		Dongargaon Hill Pagoda No. 2 98 10 51	221
Deo Dongri, V 1 50 9	60	Dongargaon Hill Pagoda No. 1 101 28 0	220
Nigrun, III 113 22 59	60	Palsi h.s. 126 36 17	197
Tarauli h.s. 190 37 46	61	Jalki Hill Pagoda 139 25 37	195
Pimpri s.		Sirsála, XXVI 144 21 10.24	38
Chincholi h.s. 98 23 59	321	Sillöd s. 147 52 59	202
Ghirogaon Tower 137 36 11	323	Ghátumbri h.s. 150 16 39	184
Sirasgaon Tower 156 25 36	324	Undangaon " 153 54 32	192
Károgaon Tower 218 41 26	325	Sarola " 159 28 0	198
Dhaigaon, XXXIV 255 2 46	320	Pallaskhed Hill Tree 245 30 47	243
Nimbgaon Tower 300 29 1	327	Wadona Peak 269 36 43	247
Tandoli " 319 31 35	320	Dongaon Hill Dipmal 291 15 18	248
Joharapur Tower 341 25 56	328	Málagaon No. 2 " 313 57 1	246
Pophla, XXVIII		Málagaon No. 1 " 316 53 59	244
Maholi Peak 3 58 58	237	Áhirmal, XXXII 337 49 59.66	42
Kankura Hill Troc 18 43 15	240	Pan Chandra Hill Dipmal 339 13 56	253
Rasulpur h.s. 71 31 26	231	Rakshasbáhan s.	
Jatoda Hill Tree 74 18 51	230	Mathuri, XXXIII 35 28 28	310
Yerúl, XXX 78 19 12.05	40	Appagaon Pagoda 101. 0 17	313
Golagaon " 84 20 6	225	Sawargaon Pagoda 286 31 38	311
Ganori Peak " 97 0 46	224	Sindkhed h.s. 347 42 58	310
Bondagaon Hill Tree 100 16 40	223	Ránigaon h.s.	
Waragaon Hill Tomb 112 32 2	222	Chincholi, XXIII h.s. 20 59 0	330
Rail " 117 53 33	210	Tandoli 82 54 31	331
Sátmaia, XXVII 132 29 13.87	37	Nimbgaon Pagoda 131 38 16	331
Dongargaon Hill Pagoda No. 1 141 7 42	220	Antarvali Pagoda 143 42 31	333
Dongargaon Hill Pagoda No. 2 183 55 15	221	Dhaigaon, XXXIV 144 48 20	329
Sirsála, XXVI 185 56 40.03	37	Chándgaon Tower 178 17 46	335
Jalki Hill Pagoda 189 0 53	195	Hatgaon Tower 207 26 1	334
Ghátumbri " 192 36 8	184	Mathuri, XXXIII 313 16 57	329
Pallaskhed Hill Tree 261 42 29	243	Párgaon Tower 336 36 27	347
Rájur, XXIX 266 19 43.94	38	Hukarda Pagoda 342 56 37	349
Rájur Hill Temple 266 21 35	249	Bhálgaon Hill Pagoda 344 9 4	345
Muramba " 308 0 40	230	Rasulpur h.s.	
Nandi Hill Peak 326 40 52	301	Yerúl, XXX 95 10 58	232
Jámkhed, XXXI 333 42 31.50	39	Röza h.s. 125 32 41	234
		Pophla, XXVIII 251 26 53	231
		Jámkhed, XXXI 306 54 37.	231

NOTE.—Station Chincholi XXIII appertains to the Bombay Longitudinal Series.

Name of Station with Azimuths of surrounding Points	No. of Triangle giving Distance	Name of Station with Azimuths of surrounding Points	No. of Triangle giving Distance
Reuti h.s.		Savangi h.s.	
Singáchori, XV	21 22 36	Antúr Hill Fort	42 21 55
Nenod Hill Tree	45 23 17	Páchora	h.s. 83 12 50
Harnása, XII	86 54 7	Kulah	" 311 15 55
Dewás Hill Temple	231 2 41	Jarandi Hill Pagoda	342 49 57
Nagda Hill	243 54 51	Sirsála, XXVI	356 47 47
Gurária Hill Peak	317 43 36		
Deogurária	h.s. 328 13 51		
Indore Pagoda	351 29 6		
		Semlia s.	
		Indráwan, XIII	30 32 49
		Kaula-ka-Máta, XI	163 56 21
		Baloda	h.s. 203 14 44
		Nagora	" 308 26 32
Rōza h.s.			
Yerúl, XXX	41 31 9		
Golagaon	h.s. 263 38 52		
Rasulpur	" 305 31 23		
		Shergarh s.	
		Kapátal	h.s. 12 53 19
		Jalodia	" 188 18 19
		Indráwan, XIII	318 42 54
Sámner h.s.			
Dhanvár, XXIV	238 6 9		
Sirsála, XXVI	352 20 52		
		Shernapur h.s.	
		Toka	h.s. 36 15 21
		Yerúl, XXX	139 47 46
		Daulatabad Minaret	165 40 21
		Aurangabad Tomb	259 4 38
		Gandali Hill Pagoda No. 1	291 27 26
		Satára	No. 2 " 315 33 58
Sarola h.s.		Sillód s.	
Sillód	s. 27 14 33	Nirud Tower	h.s. 36 36 8
Palsi	h.s. 54 0 10	Palsi	70 14 3
Moda	" 60 35 53	Sindphal Hill Pagoda	123 47 58
Sirsála, XXVI	120 32 10	Sirsála, XXVI	139 57 9
Undangaon Hill Tree	133 1 1	Undangaon Hill Tree	166 22 19
Rájur, XXIX	339 25 20	Sarola	" 207 13 45
Bhokardhan Tower	340 47 8	Bhokardhan Tower	304 18 55
		Rájur, XXIX	327 49 31
Satára No. 1 h.s.		Sindkhed h.s.	
Dhaigaon, XXXIV	16 36 43	Sherapur Hill Pagoda	35 58 5
Yerúl, XXX	138 37 27	Kolegaon Hill Tree	51 32 40
		Pipla Hill Pagoda	63 59 55
		Mathuri, XXXIII	75 37 5
		Appagaon Pagoda	163 29 29
		Rakshasbāhan	h.s. 167 43 39
		Jámkhed, XXXI	178 25 9
		Sawargaon Pagoda	192 35 49
		Khámkhed Hill Pagoda	346 53 36
Satára No. 2 h.s.		Singáchori, XV	
Dhaigaon, XXXIV	h.s. 15 41 21	Gosainbaira	h.s. 29 27 3
Toka	h.s. 52 52 55	Thikri, XVII	31 42 23 76
Shernapur	" 135 35 22	Jámnia Hill Peak	67 57 27
Yerúl, XXX	137 58 3	Songarh Peak	73 43 31
Daulatabad Fort Flag-staff	145 20 32	Mograbā, XIV	84 30 8 96
Aurangabad Tomb	191 29 27	Nálchha Hill Dargah	89 56 53
		Valli	" 96 56 56
		Lálgarh Hill Pagoda	99 38 38
		Dhár Hill Pagoda No. 1	117 13 31
Sátmála, XXVII			
Rail	h.s. 26 22 21		
Jandi	" 37 37 35		
Deher Hill Temple	72 13 52		
Anakvādi, XXV	138 1 50 05		
Arvi Peak	139 54 19		
Junvána Hill Peak	144 35 22		
Valvādi, XXIII	188 16 13 70		
Páchora	" 209 46 48		
Antúr Hill Fort	229 21 27		
Koralla Hill	242 35 55		
Sirsála, XXVI	246 31 10 79		
Pophla, XXVIII	312 22 4 67		
Damangaon Hill Pagoda	324 46 26		
Audaner Peak	351 28 55		
Yerúl, XXX	355 38 39 78		
Kanad	" 359 8 30		

Name of Station with Azimuth of intersecting Point	Azimuth of intersecting Point	Name of Station with Azimuth of intersecting Point	Azimuth of intersecting Point
Singapore, XV—(Contd.)		Singapore, XV	
Asiatic H. T. Post	101 15 37	117	105
Hongkong H. T. Post	101 15 37	118	105
Japanese H. T. Post	101 15 37	119	
India H. T. Post	101 15 37	120	
Malacca H. T. Post	101 15 37	121	
Penang H. T. Post	101 15 37	122	
Port Swettenham H. T. Post	101 15 37	123	
Singapore H. T. Post	101 15 37	124	
Tanjong Pagar H. T. Post	101 15 37	125	
Victoria H. T. Post	101 15 37	126	
Yong Lim H. T. Post	101 15 37	127	
Singapore, XVI		Singapore, XVI	
Asiatic H. T. Post	101 15 37	128	
Hongkong H. T. Post	101 15 37	129	
Japanese H. T. Post	101 15 37	130	
India H. T. Post	101 15 37	131	
Malacca H. T. Post	101 15 37	132	
Penang H. T. Post	101 15 37	133	
Port Swettenham H. T. Post	101 15 37	134	
Singapore H. T. Post	101 15 37	135	
Tanjong Pagar H. T. Post	101 15 37	136	
Victoria H. T. Post	101 15 37	137	
Yong Lim H. T. Post	101 15 37	138	
Singapore, XVII		Singapore, XVII	
Asiatic H. T. Post	101 15 37	139	
Hongkong H. T. Post	101 15 37	140	
Japanese H. T. Post	101 15 37	141	
India H. T. Post	101 15 37	142	
Malacca H. T. Post	101 15 37	143	
Penang H. T. Post	101 15 37	144	
Port Swettenham H. T. Post	101 15 37	145	
Singapore H. T. Post	101 15 37	146	
Tanjong Pagar H. T. Post	101 15 37	147	
Victoria H. T. Post	101 15 37	148	
Yong Lim H. T. Post	101 15 37	149	
Singapore, XVIII		Singapore, XVIII	
Asiatic H. T. Post	101 15 37	150	
Hongkong H. T. Post	101 15 37	151	
Japanese H. T. Post	101 15 37	152	
India H. T. Post	101 15 37	153	
Malacca H. T. Post	101 15 37	154	
Penang H. T. Post	101 15 37	155	
Port Swettenham H. T. Post	101 15 37	156	
Singapore H. T. Post	101 15 37	157	
Tanjong Pagar H. T. Post	101 15 37	158	
Victoria H. T. Post	101 15 37	159	
Yong Lim H. T. Post	101 15 37	160	
Singapore, XIX		Singapore, XIX	
Asiatic H. T. Post	101 15 37	161	
Hongkong H. T. Post	101 15 37	162	
Japanese H. T. Post	101 15 37	163	
India H. T. Post	101 15 37	164	
Malacca H. T. Post	101 15 37	165	
Penang H. T. Post	101 15 37	166	
Port Swettenham H. T. Post	101 15 37	167	
Singapore H. T. Post	101 15 37	168	
Tanjong Pagar H. T. Post	101 15 37	169	
Victoria H. T. Post	101 15 37	170	
Yong Lim H. T. Post	101 15 37	171	
Singapore, XX		Singapore, XX	
Asiatic H. T. Post	101 15 37	172	
Hongkong H. T. Post	101 15 37	173	
Japanese H. T. Post	101 15 37	174	
India H. T. Post	101 15 37	175	
Malacca H. T. Post	101 15 37	176	
Penang H. T. Post	101 15 37	177	
Port Swettenham H. T. Post	101 15 37	178	
Singapore H. T. Post	101 15 37	179	
Tanjong Pagar H. T. Post	101 15 37	180	
Victoria H. T. Post	101 15 37	181	
Yong Lim H. T. Post	101 15 37	182	

Name of Station with Azimuths of surrounding Points	No. of Triangle giving Distance	Name of Station with Azimuths of surrounding Points	No. of Triangle giving Distance
Valvádi, XXIII—(Contd.)		Vatli h.s.	
Bahádurpur h.s. 136 32 23	167	Báwangaz, XVIII. 18 14 6	120
Kankráj " 150 50 34	162	Singárchori, XV 276 42 10	119
Ajnád, XXII 166 52 1'21	30	Mograbá, XIV 290 56 54	119
Argaon, XXI 209 27 53'73	30		
Jalka Peak 247 25 23	150		
Dhanvár, XXIV 249 47 13'48	31		
Bámbrud Hill Pagoda 261 23 44	155		
Mohári Hill Peak 269 54 11	159		
Mohári " 271 41 51	157		
Sirsála, XXVI 307 32 38'54	33		
Koralla Hill 311 44 46	191		
Varád " 329 17 36	194		
Antúr Hill Fort 351 20 59	178		
Varád h.s.		Yerúl, XXX	
Valvádi, XXIII 149 21 1	194	Toka h.s. 17 54 59	266
Dhanvár, XXIV 210 50 3	194	Deher Hill Temple 141 49 32	213
		Jamdi " 160 12 24	212
		Rail " 163 33 31	210
		Sátmála, XXVII 175 39 15'79	40
		Röza " 221 30 30	233
		Guddana Hill Pagoda 229 22 55	226
		Bondagaon Hill Tree 243 1 1	228
		Waragaon Hill Tomb 243 58 7	222
		Ganori Peak 247 34 37	224
		Golagaon " 250 53 30	225
		Godagaon Hill Peak 257 31 51	227
		Pophla, XXVIII 258 12 42'28	40
		Jatoda " 262 1 40	228
		Jatoda Hill Tree 262 10 53	229
		Rasulpur " 275 9 1	232
		Maholi Peak 277 41 13	237
		Mitmita Peak 297 19 37	236
		Daulatabad Minaret 297 54 59	271
		Daulatabad Fort Flag-staff 301 30 44	269
		Jámkhed, XXXI 302 5 16'32	41
		Gandali Hill Pagoda No. 1 303 22 26	273
		Satára No. 2 " 317 54 57	265
		Satára No. 1 " 318 34 17	261
		Shernapur " 319 46 4	268
		Dhaigaon, XXXIV 353 1 50'33	44
Varod h.s.			
Bámbrud h.s. 39 17 15	177		
Mohári " 266 12 25	176		
Páchora " 284 7 5	175		
Sirsála, XXVI 307 57 35	176		
Varundi h.s.			
Dhaigaon, XXXIV 44 41 9	274		
Gedáda Dipmal 76 9 19	279		
Bhir Kingaon Pagoda 81 0 59	278		
Parola Idgah 85 56 44	277		
Dhánura Pagoda 88 25 14	276		
Walauj Pagoda 111 46 59	275		
Kasanor h.s. 321 11 34	274		

December, 1892.

J. ECCLES,
In charge of Computing Office.

Name of Station or Point	District	Description	Latitude North	Longitude East of Greenwich	Height of Station — Height of Structure	No. of Triangl.
Ahirmal Hill Mosquo ...	Nizam's Territory	Large mosquo on a conspicuous and isolated hill on which is the principal station of the same name. 1845.	19 33 16.1	76 6.40.4	...	...
Ajnád, XXII ...	Khándesh	<i>Vide</i> page 8—G. ...	21 18 49.40	75 5 0.92	$\frac{1641}{0.7}$	27
Ambad Hill Pagoda <i>Ambhar h. pag.</i>	Nizam's Territory	On a conspicuous hill S.E. of the town of that name, about 4 miles S. of Lalvádi village, and 3 miles N. by W. of Dargan. 1845.	19 36 20.7	75 50 18.6	...	809
Ambad h.s. <i>Kasarwari Stn.</i>	"	On a conspicuous and isolated hill about 2 miles S.W. of the town of the same name. 1845.	19 35 19.34	75 48 50.41	...	284 235
Ambáh Hill Pagoda <i>H. Pag. Ambaw</i>	Jaora State	On a small isolated hillock immediately S.W. of the village of that name, about 2 miles S.E. of Harnadon on the road from Partágarh to Malhargarh, $\frac{1}{2}$ of a mile N.W. by N. of Sajanpura, and $\frac{1}{2}$ miles S. of Hemri village; Western Malwa (Málwa) Agency. 1848.	24. 9 41.7	74 57 31.5	...	...
Ambáh h.s. ...	Indore State	On a small conical hill about $\frac{1}{2}$ miles N.E. of the village of that name on the high road from Mhow (Man) to Khandwa, $\frac{2}{3}$ miles S.W. of Duldá, and the same distance S.E. of Marsola large village; Indore (Indor) Political Agency. 1847.	22 33 22.01	75 53 32.16	[2387]	112
Ambáhpani Hill Temple	Barwáni State	On a high conical hill, about $\frac{1}{2}$ miles N.W. of the village of that name close to the road from Barwáni to Pansamal, and $\frac{2}{3}$ miles N. by E. of Kadwalin village on the Gai river; pargana Páti. Deputy Dheel Agency. 1847.	21 58 7.5	74 54 47.2	...	184 185
Anakvádi, XXV ...	Khándesh	<i>Vide</i> page 8—G. ...	20 47 2.38	74 44 9.52	$\frac{2243.74}{3.2}$	31
Andaner Masjid ...	Nizam's Territory	Tower. Near the large village of that name, about $\frac{2}{3}$ miles N.W. of Kanad town. 1846.	20 16 26.4	75 8 38.6	...	217
Andaner Peak <i>Hewarkhair Pk.</i>	"	About 2 miles N.E. of the large village of Andaner on the road from Kanad to Cháligan, and the same distance N. of the former town. 1846.	20 17 17	75 10 18	...	215 216
Andri Hill Pagoda	"	About $\frac{2}{3}$ miles S.S.W. of the village so called, and 5 miles N.W. of Nalgaba on the road from Aurangabad to Ajanta. 1845.	20 14 16	75 31 13	...	...
Anjar h.s. <i>Anjer H. Pag.</i>	Barwáni State	On a hill pagoda S. of Anjartown; Deputy Dheel Agency. 1847.	22. 2 15.6	75 5 46.3	[728]	189
Antarvali Pagoda ...	Ahmednagar	About a mile S.S.W. of the village of that name, 9 miles E. by S. of Varúr on the road to Mánúr, $\frac{4}{5}$ miles S.W. by W. of the large village of Bodhagaon, and $\frac{1}{2}$ miles N. of Kánigaon; sub-division Shergaon. 1845.	19 16 22.2	75 25 43.5	...	333
Antúr Hill Fort ...	Nizam's Territory	White tower at the N. end of the hill fort. 1846.	20 25 42.6	75 16 35.9	...	178 179

Name of Station or Point	District	Description	Latitude North	Longitude East of Greenwich	Height of Station — Height of Structure	No. of Triangle
Appagaoon Pagoda ...	Nizam's Territory	Spire of the large pagoda at the village of the same name on the left bank of the Godáviri river, about 1½ miles W. of Pipalgaon on the road from Gevra town, and 1 mile S.S.E. of Ballagaon. 1845.	19 22 31' 3"	75 39 49' 2"	feet ...	312 313
Argaon, XXI ...	Khándesh	<i>Vide</i> page 8—G. ...	21 18 27' 70"	75 34 4' 92"	$\frac{3129}{0.8}$	28, 29
Arvi Peak ...	"	Of a conspicuous, conical hill about ½ a mile E. of the high road from Málagaon to Dhulia, and 3½ miles S. of Laling on the above named road: taluka Dhulia. 1846.	20 46 4"	74 46 42"	[2108]	171 172
Asakheri Hill Tree <i>Sawgarh H.</i> ...	Amjhara State	Small tree in the centre of the conspicuous and isolated hill, about a mile N.W. of Asakheri village, the same distance N. of Silote, 2½ miles S. by E. of Sagar town, and 4 miles S.W. of Akolia close to the high road from Mhow to Rutlam (Ratlám): Bheel Agency. 1847.	22 34 10"	75 39 4"	[2096]	117
Aurangabad Tomb ...	Nizam's Territory	Large domo of Begam bibi-ka makbara on the right bank of the Dudhna river, and close N.W. of the town of Aurangabad. 1845.	19 54 3' 4"	75 21 43' 9"	...	272
Ausa Hill Fort ...	"	Centre of building in the hill fort. 1846.	20 33 58' 8"	75 37 23' 6"	...	186
Azimpur s. <i>Azimpoora stn.</i> ...	Ujjain State	On some high ground, about ½ a mile S.E. by S. of the village so called, 3 miles N.W. by W. of the town of Ujjain. The cart road from Ujjain to Unol passes within a mile N.E. of the station: Western Malwa Agency. 1848.	23 13 5"	75 46 3"	...	...
Bábákuvar, XX ...	Khándesh	<i>Vide</i> page 7—G. ...	21 35 33' 54"	74 57 21' 60"	$\frac{2658}{1.0}$	25, 26
Bahádurpur h.s. ...	"	On a hill, about 1½ miles W. of the large village so called on the left bank of the Bori river, and 6½ miles W.N.W. of the town of Párola on the high road from Dhulia to Erandol: taluka Amalner. 1846.	20 54 28' 94"	75 3 27' 66"	[907]	167 168
Baitalvádi Fort ... <i>Wari Fort S. Tower</i>	Nizam's Territory	Southern tower of the fort. 1846. ...	20 33 4' 6"	75 39 42' 0"	...	189
Bálágara, XXIV° ...	Mandsaur State	<i>Vide</i> page 4—G. ...	24 10 21' 90"	75 0 15' 84"	$\frac{1804}{3}$	1
Baloda s. ...	Dhár State	This station was originally fixed by the secondary triangulation of the Bhopal (Bhopál) and Malwa Topographical Survey, and is about 2 miles N.W. of the village of Baloda, and 2½ miles N.E. of Gadgára on the high road from Rutlam to Indoro: Bheel Agency. When visited in 1883, the station was found to consist of a platform of mud and stones, 2 feet in height, having a mark-stone in its upper surface. 1882-83.	22 59 45' 94"	75 19 24' 22"	$\frac{1753}{2}$	91, 92

* This station appertains to the Karachi Longitudinal Series.

Name of Station or Point	District	Description	Latitude North	Longitude East of Greenwich	Height of Station — Height of Structure	No. of Triang.
Bāmbrud Hill Pagoda <i>Bāmbrud H. Pag.</i>	Khāndesh	On the southern point of a small, isolated hill about $\frac{1}{2}$ a mile N.E. of the village of this name, and $\frac{1}{2}$ miles E.N.E. of Māheji Railway Station of the G.I.P. Line; taluka Pāchāra. 1846.	20 47 42	75 32 08	feet [1016]	155 156
Bāmbrud h.s.	"	On a hill, about $2\frac{1}{2}$ miles W.S.W. of the village so called, and close S.E. of Taikvādi on the road from Chālisgaon Railway Station to Bhādgāon town; sub-division Chālisgaon. 1846.	20 34 30.32	75 8 27.89	...	177
Bargar h.s. <i>Wargark h. tree and stn.</i>	Jaora State	On same high ground, about a mile S.E. by E. of the village of Bāgakeri, and $1\frac{1}{2}$ miles N.N.W. of Bargar village on the road from Piplāda to Jaora, and $\frac{1}{2}$ miles W.S.W. of the latter: Western Malwa Agency. 1848.	23 37 16.09	75 5 57.53	...	68, 69
Barkhera Hill Bush <i>Gogaria H. Bush</i>	"	At the N.W. corner of a small flat-topped hill, about $\frac{1}{2}$ of a mile E. of the village of Barkhera, $\frac{1}{2}$ of a mile S.W. of Dāngloda village, and $1\frac{1}{2}$ miles W. of Gogarpura village: Western Malwa Agency. 1847-48.	24 8 31	75 0 7	...	49
Bāwāngaz, XVIII	Barwāni State	<i>vide page 7—G.</i>	21 59 23.20	74 53 41.99	2112 *	22
Bercha Hill Tree <i>Malhicara H. Tree</i>	Dhār State	On the eastern end of a high, isolated hill, about $\frac{1}{2}$ of a mile S.W. by S. of the village of Bercha, 1 mile N. of Bāwān, and $\frac{1}{2}$ miles N.W. by N. of Ranija Station on the Sindhia-Neemuch Section of the B.D. and C.I. Railway: Bhoal Agency. 1848.	23 14 12	75 16 7	...	85, 86
Bhālgaon Hill Pagoda	Ahmednagar	On the eastern extremity of a ridge running E. from a flat-topped hill, about $\frac{1}{2}$ of a mile S. by W. of the village so called, and $2\frac{1}{2}$ miles N.N.E. of the large village of Sirūr on the S. bank of the Siaphāna river: taluka Jāmkhed. 1845.	19 5 31.2	75 29 32.0	[1950]	315 316
Bhātakeri Hill Pagoda	Jaora State	At the N. end of a small, isolated hill on the Mandasaur and Jaora state boundary—about 14 miles N.N.E. of Bhātakeri village, and 5 miles N.W. by W. of the town of Jaora on the main road from Mhoir to Neemuch (Nimach): Western Malwa Agency. 1848.	23 40 45.4	75 6 0.7	[1804]	65
Bhātakeri Hill Tree	"	At the S. end of a small, isolated hill on the N. end of which stands a pagoda: Western Malwa Agency. 1848.	23 40 24	75 5 59	...	66, 67
Bhir Kingaon Pagoda	Nizam's Territory	South of the town of that name at the junction of the roads from Aurangabad, Chendravada, Pipri and Pethan, and about 12 miles S. of Aurangabad. 1845.	19 42 8.3	75 20 41.9	...	278
Bhokardhan Tower	"	Highest and conspicuous tower in the town of that name: 1846.	20 15 30.2	75 48 40.8	...	207
Bijagarh Hill Fort	Indore State	Northern tower of the ruined fort of that name at N.E. corner of a flat-topped high hill, about a mile S. of the old ruined fort of Jalālabad on the road to Bhadwāli; pargana Jalālabad: Indore Political Agency. 1847.	21 41 0.9	75 23 58.1	...	138

* See description of this station.

Name of Station or Point	District	Description	Latitude North	Longitude East of Greenwich	Height of Station — Height of Structure	No. of Triangle
Bondagaon Hill Tree <i>Maismal</i>	... Nizam's Territory	Conspicuous tree on a hill close to the village so called, about 2 miles N.E. of Pipalgaon, and 7 miles W.S.W. of Pulmari town on the road from Aurangabad to Ajanta. 1846.	20 3 46	75 22 16	feet ...	228
Bori Hill Peak <i>Gowal Pk.</i>	... Barwani State	About 2 miles S. by E. of the village of that name on the road from Rajpur to Pansamal, and 3½ miles W. by S. of Naktimata village: pargana Patis. Deputy Bheel Agency. 1847.	21 47 34	74 52 45	[2331]	186
Bori h.s.	... Nizam's Territory	On an isolated hill, about 1½ miles S.S.W. of the village so called on the road from Ranjani to Ambad town, the same distance E. of the latter, and 2 miles N.N.W. of Balagaon. 1845.	19 36 42.09	75 52 32.95	...	283
Bori Hill Tree	... "	Conspicuous tree close to the preceding station of the same name. 1845-46.	19 36 42	75 52 33	...	...
Búda, XXI*	... Rámpura State	<i>Vide</i> page 3—G. ...	24 14 11.86	75 10 43.06	$\frac{1526}{4}$	1
Budapura h.s. <i>Gopalpoor H.S. Tree</i>	... Rutlam State	On the highest point of a group of hills, about ½ a mile S. of the small village of that name, 3½ miles S.W. of Gopalpura, 2 miles N.W. of Palsoria on the road from Shingarh to Rutlam, and 3½ miles E. of Shingarh: Western Malwa Agency. 1848.	23 21 19.54	74 57 9.14	...	82
Chakeri s. <i>Chickara Stn.</i>	... Barwani State	On low ground, about 1½ miles E. by N. of Anjar town, the same distance W. by N. of Chápri village, and immediately N. of the cart road from Anjar to Mandwara on the Nabal stream: Deputy Bheel Agency. 1847.	22 24 1.89	75 7 38.65	...	181
Chándgaon Tower	... Ahmednagar	About ½ a mile N.N.W. of the village of that name, 4½ miles N. by E. of Ránigaon, 2 miles E. of the road from Palthan to Mánur, and 10 miles S. of the former: sub-division Shevgaon. 1845.	19 19 10.9	75 26 31.5	...	335
Chaoradongar h.s.	... Nizam's Territory	On a square, flat-topped hill rising about 75 feet above the surrounding plateau, about 8 miles N.W. of Jalna, 1½ miles N. of Pangri village, 3 miles W. by N. of Mandwa village, and 4½ miles N.N.W. of Nagavadi on the road from Jalna to Aurangabad. The station is denoted by a mark-stone embedded flush with the ground. 1883-84.	19 56 15.87	75 50 37.09	2138	251 252
Chincholi, XXIII†	... "	<i>Vide</i> page 10—G. ...	18 55 25.27	75 18 41.47	$\frac{2028}{10.6}$	47,48
Chincholi Hill Dipmal	... Ahmednagar	Large dipmal about ½ of a mile W. by S. of the following station of the same name: taluka Nevasa. 1845.	19 30 12.1	75 5 30.2	...	322
Chincholi h.s.	... "	On a low hill, about ½ a mile S. of the road from Pichadgaon to Gevrai, 2½ miles W. by S. of the latter, 1½ miles S. by W. of Dighi, and 2½ miles S.E. of Babulkhedra: taluka Nevasa. 1845.	19 30 12.65	75 5 43.33	...	316 317

* This station appertains to the Karachi Longitudinal Series.

† This station appertains to the Bombay Longitudinal Series.

Name of Station or Point	District	Description	Latitude North	Longitude East of Greenwich	Height of Station — Height of Structure	No. of Triangle
Chinnapur Hill Pagoda ...	Nizam's Territory	About 1½ miles W. by S. of the village of that name, 3½ miles S.S.W. of Antur fort, and 4 miles E. of Soigaon on the road from Aurangabad to Bhul. 1846.	20 23 22	75 15 49	...	...
Damangaon Hill Pagoda <i>Sawang H. Pag.</i>	"	On a detached hill, about 1½ miles E. of the village of that name, 2½ miles W. of Saranghi village, and 4 miles N.N.E. of Tokli largo village. 1846.	20 8 32	75 18 55.9	...	219
Damangaon s. ...	"	On a tower close to the village so called, about 8 miles W.S.W. of Dongaon town, and 4 miles W. of Pangri village on the road from Lonegaon to Jalna. 1845.	19 59 49.09	75 51 42.24	...	250
Daulatabad Fort Flag-staff ...	"	On the central and highest tower of the hill fort. 1845.	19 56 28.9	75 15 15.3	...	269 270
Daulatabad Minaret ...	"	In the town of Daulatabad. 1845. ...	19 56 37.4	75 15 33.0	...	271
Dohor Hill Temple ...	Khandesh	Mahader pagoda on the hill fort, about 1½ miles S. of the old revenue town of Deher, 6 miles in the same direction of Pimparkhed Railway Station of the G.I.P. Linc. 1846.	20 16 17.7	74 56 50.0	...	213
Deo Dongri, V ...	Gwalior State	<i>See page 4—G.</i> ...	23 26 47.79	75 34 44.17	$\frac{1727}{*}$	6.8
Dooguravia h.s. ...	Indore State	On a detached, conical hill, about ½ a mile S.W. of the village of the same name, 5½ miles S.E. of the Indore city. A tramway line from the Holkar State Railway leads to the hill which is a celebrated place of pilgrimage: Indore Political Agency. 1847.	22 40 9.86	75 58 23.52	...	102 103
Devalgaon Tree ...	Ahmednagar	Conspicuous tree on the table-land near the village of that name, about 2 miles S. by W. of Karanji village on the road from Amrapur to Ahmednagar. 1845-46.	19 6 14	75 1 46	...	...
Dowas Hill Temple ...	Dewas State	On an isolated, conical hill immediately N. of the high road from Dombay to Agra, the town of Dowas being on the opposite side of the road: Indore Political Agency. 1847.	22 58 12.5	76 6 2.9	[2167]	104
Dhabadi Hill Tree <i>Dobari Trees</i>	Nizam's Territory	Near the town of that name on the road from Aurangabad. 1846.	20 3 23	75 47 6	...	...
Dhaigaon, XXXIV	Ahmednagar	<i>See page 10—G.</i> ...	19 30 35.04	75 15 10.99	$\frac{1553}{2.0}$	44
Dhajura Hill Peak <i>Jamb Ghaut Pk.</i>	Keshavnagar State	The highest peak on the Vindhya range, about 3 miles S.S.W. of Keshavnagar, 2½ miles W. of Doka village, 2 miles N. by E. of Dora Jani village, and 4½ miles S.W. of the Rajputana-Malwa Railway Line: Indore Political Agency. 1847.	22 25 52	75 51 20	[2747]	116
Dhalnu h.s. ...	Ujjain State	On a flat-topped hill on a plateau, about a mile E.E. of the village of that name, 2 of a mile W. by S. of Kherla village, and 1½ miles S.S.E. of the village of that on the east end from Unel to Ujjain: Western Malwa Agency. 1845.	23 15 39.26	75 42 24.17	[1773]	87

* See description of this station.

Name of Station or Point	District	Description	Latitude North	Longitude East of Greenwich	Height of Station Height of Structure	No. of Triangle
Dhamnár, II	Mandsaur State	<i>Fide</i> page 4— <i>a</i>	23 53 22.29	75 11 35.91	$\frac{\text{feet } 1678}{1}$	1
Dhanora, VII	Sailāna State	<i>Fide</i> page 5— <i>a</i>	23 16 30.23	75 17 42.57	$\frac{1883}{18.0}$	9
Dhánura Pagoda <i>Dhorkhara pag.</i>	Nizam's Territory	Near the village of that name on the left bank of a tributary of the Gánda river and on the road from Gándápur town, about 4 miles E. by S. of Dhaigaon on the road from Aurangabad to Ahmednagar. 1845.	19 42 56.0	75 14 46.6	...	276
Dhanvár, XXIV	Khándesh	<i>Fide</i> page 8— <i>a</i>	20 53 3.31	75 38 29.61	$\frac{1164.81}{2.0}$	31, 32
Dharakpur Hill Tree	Ágar State	On an isolated hill on which stands the village of Dharakpur, about 1½ miles S.E. of Bápsia on the road from Barandia to Gangrá, and ½ of a mile S.W. by S. of Ratanpur: Western Malwa Agency. 1848.	23 50 19	75 48 33	[1650]	59
Dhár Hill Pagoda No. 1	Dhár State	White temple with a lofty spire known as Kálka Mátá on the small hill close W. of a large tank, about a mile W. of the town of Dhár, and close N. of the high road from Dhár to Amjhera: Bhool Agency. 1847.	22 35 51.0	75 19 27.1	[1938]	118
Dhár Hill Pagoda No. 2	"	On an isolated, conical hill, about 1½ miles S.E. of the town of Dhár, 1 mile S. of the high road to Bombay, and 2 miles N. of Párlia village on the road from Dhár to Dilaura: Bhool Agency. 1847.	22 34 36	75 21 30	[1967]	...
Dhár h.s. <i>Amulnair Stn.</i>	Khándesh	On a detached hill about a mile S.S.W. of the village of this name, ½ a mile S.S.E. of another detached hill crowned with two temples, and 3½ miles N.W. by N. of the town of Amalner on the left bank of the Bori river, a tributary of the Tápti (Tápi): táluks Amalner. 1846.	21 4 43.93	75 4 29.12	[739]	164 165
Dhutni Peak <i>Doodnia Pk.</i>	Dhár State	Of a conical, rocky hill on the Vindhya range, close to the little village so called, about 5 miles W. of Nálchha town, and 1½ miles in the same direction of Amkho village: táluks Nálchha. Bhool Agency. 1847.	22 25 3	75 21 44	[2403]	123
Digau h.s.	Mandsaur State	This station was originally fixed by the secondary triangulation of the Bhopal and Malwa Topographical Survey, and is on some high ground, about ½ a mile W. of Chhota Digau, close to the cart road to Somli, 1½ miles S. by E. of Mália village, and 2 miles N.E. of Bara Digau close to the cart road to Mandsaur: Western Malwa Agency. The station was found to consist of a pillar of stones and mud cement, 18 inches high, and 3½ feet in diameter, with a circular stone platform of the same height and 11 feet in diameter. 1882-83.	24 3 42.70	75 12 59.22	$\frac{1548}{1.5}$	50, 51
Dohori h.s.	Khándesh	About the centre of a detached hill, about 1½ miles S. by W. of the village of this name, the same distance N.N.E. of Hivarkhoda, and 4 miles N.W. by N. of the town of Jámner: táluks Jámner. 1846.	20 51 30.54	75 47 8.10	[1085]	161

Name of Station or Point	District	Description	Latitude North	Longitude East of Greenwich	Height of Station — Height of Structure	No. of Triangle
<i>Dongaon Hill Dipmal</i> ... <i>Dondgaon dip.</i>	Nizam's Territory	Near the town of that name, about 7 miles W. of Deulgaon Raja, 3 miles S.W. of Pokri villogo on the road from Jafferabad to Jóna. 1845.	20 1 46.2	75 58 52.2	...	215
Dongargaon Hill Pagoda No. 1 ...	"	Conspicuous temple on the southern end of a range of hills near Dongargaon village, about 2 miles E. of Sabalgaon, and 5 miles N.W. of Pulmari on the road from Aurangabad to Ajanta. 1846.	20 9 12.6	75 24 41.7	...	220
Dongargaon Hill Pagoda No. 2 ... <i>Patri H. Pag.</i>	"	Domo of the pagoda near the villogo of that name, about 4 miles E.N.E. of Pulmari on the road from Aurangabad to Ajanta, and 3 miles S.S.W. of Potri villogo on the same road. 1846.	20 6 46.5	75 30 52.6	...	221
Dudhala, IV ...	Jhallowar State	<i>Fide page 4—G.</i> ...	23 50 54.31	75 49 25.06	1675 5	5
Dulet Temple ...	Indore State	Close to the villogo of that name on the right bank of the Sipra river, about 1/2 a mile W. of the cantonment boundary of Mehidpur: Indore Political Agency. 1818.	23 28 31.4	75 40 5.6	...	78, 79
Dundgaon Mosque ...	Nizam's Territory	Close S. of the villogo so called on the road from Ambad to Palthan, and about 5 miles S.W. of the former. 1845.	19 30 53.3	75 42 4.0	...	300
Gandali Hill Pagoda No. 1 ...	"	On a detached hill close to the road from Aurangabad to Patoda, close E. of the villogo so called, and about 5 miles S.E. of Aurangabad. 1845.	19 49 29.7	75 26 11.4	...	273
Gandali Hill Pagoda No. 2 ...	"	On a conical hill close S.W. of the villogo so called, about 4 miles S.S.E. of Satara town, 2 miles S. of the road from Aurangabad to Patoda, and 5 miles S.S.E. of Aurangabad. 1845.	19 49 4	75 25 19	...	...
Ganori Peak ...	"	Of a conical hill near the villogo of that name, about 6 miles S.W. of Palmari town on the road from Aurangabad to Ajanta. 1846.	20 3 11	75 23 18	...	224
Gednada Dipmal ... <i>Birkingaon Dip.</i>	"	Close to the villogo of that name, about 2 miles S.W. of Bhur Kingaon town, the same distance N.N.W. of Suppara villogo on the road from Bhur Kingaon to Tandeli. 1815.	19 41 14.7	75 19 39.0	...	279
Gerrai Hill Pagoda <i>Gerrai H. Pag.</i>	"	Large spire of the pagoda about 3 1/2 miles S.W. of Gerrai town, 2 1/2 miles W. by N. of Deke Yadgaon on the road from Gerrai. 1845.	19 13 41.9	75 45 3.2	...	309
Ghatumbri h.s. ...	"	On a peak on the verge of the ghát, about 2 miles W. by S. of the villogo so called, close N.E. of the small villogo of Nánagaon, 7 miles W.N.W. of the large villogo of Undagaon, and 4 1/2 miles S. by W. of Baitalvadi town. 1846.	20 30 37.34	75 37 15.93	...	184 185

Name of Station or Point	District	Description	Latitude North	Longitude East of Greenwich	Height of Station — Height of Structure	No. of Triangle
Ghiregaon Tower ... <i>Girgaon</i>	Ahmednagar	In the centre of the small village of that name, about 2½ miles E. of the large village of Salabatpur, 2½ miles N. of Gorrái, and 1½ miles W. by S. of Sirsagaon: taluka Nevása. 1815.	19 32 48.4	75 7 40.4	... <i>feet</i>	323
Godagaon Hill Peak <i>Gorchgaon Pk.</i>	Nizam's Territory	Of a conical hill, about 1½ miles E. of the village of that name, 6 miles N.E. of Daulatabad, and the same distance E. of Rēza town on the road to Daulatabad. 1815-46.	20 0 12	75 19 9	...	227
Golagaon Domo ...	"	Close to the village so called, about 4 miles E. by N. of Rēza town, 6 miles N. by E. of Daulatabad, and 1 mile N. of Godagaon. 1815.	20 1 15.2	75 18 45.0	...	...
Golagaon h.s. ... <i>Golehgaon Pk. Stn.</i>	"	On the centre of a conical hill, about 1½ miles E. of the village of that name, 7 miles N.N.E. of Daulatabad, and the same distance E. of Ellora. 1816.	20 1 20.51	75 19 53.66	...	225
Gola Pagoda ... <i>Golar pag.</i>	"	Near the village of that name, about a mile S. by W. of Pangri, 9 miles in the same direction of Jalna, and 1 mile E.S.E. of Nagjári village on the road from Jalna to Ambad. 1815.	19 43 29.3	75 52 46.3	...	295
Gosainbaira h.s. ...	Dhár State	This station was originally fixed by the secondary triangulation of the Khándesh Topographical Survey, and is on a low hill of that name lying 2 miles S. of Kharakvanni village, and 1 mile W. of the road from Sonkhedi to Dolani: Dhool Agency. The station was found to consist of a mark-stone buried flush with the ground and protected by a large heap of stones. 1882-83.	22 4 2.81	75 30 26.47	972	130
Gualed Hill Tree ...	Jhallawar State	On a small hill about ½ of a mile N. by W. of the village so called, and 1 mile N.E. of Rojána on the cart road from Dag to Gangrá: Harowtee (Haráoti) Agency. 1817-18.	23 57 42	75 44 38	[1628]	55, 56
Guddana Hill Pagoda <i>Maismal H. Pag.</i>	Nizam's Territory	About a mile N.E. of the village so called, 2 miles S. by E. of Takli large place, and 4½ miles N.E. of Rēza town. 1815.	20 3 22.6	75 17 26.5	...	226
Gumánpur, XVI ...	Amjhera State	<i>vide page 7—G.</i>	22 34 50.27	74 54 59.56	$\frac{1825}{5.3}$	21
Gurárin Hill Peak <i>Dariah Pk.</i>	Indore State	The highest and conspicuous summit of a hill, about a mile W.N.W. of the village of that name, 3 miles W. of Baroda village, and 2 miles S. of Asrawad village on the road from Indore to Rághogarhi: Indore Political Agency. 1817.	22 40 23	76 0 45	[2295]	106
Gurla, VIII ...	Gwalior State	<i>vide page 6—G.</i>	23 17 36.14	75 35 36.57	$\frac{1716}{6.7}$	10
Harnása, XII ...	Depálpur State	<i>vide page 6—G.</i>	22 47 29.91	75 35 37.33	$\frac{1818}{10.2}$	15
Hatgaon Tower ... <i>Madgaon S.W. Ft.</i>	Ahmednagar	S.W. tower in the village so called on the road from Mungi, about 3½ miles S. by E. from the latter, and 2 miles E.S.E. from Pingvádi village: taluka Nevása. 1815.	19 21 38.3	75 30 11.2	...	334

Name of Station or Point	District	Description	Latitude North	Longitude East of Greenwich	Height of Station — Height of Structure	No. of Triangles
Hukarda Pagoda ...	Nizam's Territory	Immediately above the S. bank of a stream, about 4 of a mile W. of the village so called, 2½ miles N. by W. of Bhālgāon, and the same distance S.S.E. of Mīrsāngri. 1845.	19 7 53' 3"	75 29 0' 1"	... feet	349
Indoro Pagoda ...	Indoro Stato	Mahader pagoda close W. of the palace in the city; Indoro Political Agency. 1847.	22 43 3' 0"	75 53 46' 2"	[1791]	107
Indoro Palace ...	"	In the town. 1847.	22 43 6	75 53 49	...	...
Indráwan, XIII ...	Dhār Stato	<i>Fide</i> page 6—G.	22 48 48' 54"	75 13 23' 78"	$\frac{1834}{7.5}$	16, 17
Jadgaon h.s. Jurgaon Stn. ...	Nizam's Territory	On a hill, about 6 mile N. of the village so called, the same distance E. of Tongaon, and 1½ miles S.S.E. of Ladgaon on the road from Aurangabad to Jálao. 1845.	19 50 44' 72"	75 33 30' 94"	...	238 259
Jaipur Hill Tree Jowpoor Tree ...	"	About ½ a mile S. of the village of this name, 2½ miles N.W. of Satana village on the road from Aurangabad to Jálao, and the same distance E. by W. of Bangaon on the road from Aurangabad to Ladsāngri. 1845.	19 53 29	75 34 18	...	260
Jalálabad, XIX ...	Khergon Stato	<i>Fide</i> page 7—G.	21 40 35' 29"	75 26 34' 90"	$\frac{2613}{2.5}$	24
Jalálkhori, X ...	Ujjain Stato	<i>Fide</i> page 5—G.	23 10 34' 89"	75 44 35' 01"	$\frac{1749}{3.8}$	14
Jalka Peak Itnar Pk. ...	Khásodesh	Towards the N.W. end of a small detached hill, about 1½ miles N. by W. of the village so called on the metall. road from Mhasārad to Jámner, and 4½ miles S.S.E. of Shireoli Station on the G.I.P. Railway: sub-division Nasirabad. 1846.	20 52 28	75 34 6	...	150
Jalki Hill Pagoda Dhamni H. Pag. ...	Nizam's Territory	Spire. About 1½ miles S.S.W. of the village so called, the same distance N.N.E. of Tulni village, and 2½ miles N.N.W. of Kharso. 1845-46.	20 24 52' 3"	75 34 20' 8"	...	195 196
Jalki Hill Peak ...	"	About 3 miles W.N.W. of the village so called, 2 miles W. by N. of Jambai village, 2½ miles N.N.E. of Sindphal, and 1½ miles W. by N. of Godangaon. 1846.	20 27 8	75 32 14	...	...
Jálao Hill Pagoda ...	"	White pagoda E. of the town on the road to Sindkhed, and near the village of Mārthi on the same road. 1845.	19 51 39' 2"	75 58 47' 9"	...	280 290
Jálao Pagoda ...	"	Large white Ganapati pagoda E. of the town and W. of the Infantry and Cavalry Lines. 1845.	19 51 14' 8"	75 56 54' 0"	...	287 288

Name of Station or Point	District	Description	Latitude North	Longitude East of Greenwich	Height of Station — Height of Structure	No. of Triangle
Jalodia h.s. ...	Dhār Stato	This station was originally fixed by the secondary triangulation of the Bhopal and Malwa Topographical Survey, and is on a slight rise near the western edge of a plateau, about 2½ miles W. by N. of the village of Jalodia, 3½ miles N.W. by N. of Kod town, and the same distance W.S.W. of Pipria. It is close to the road from Kod town to Delchi: Bheel Agency. When visited in 1883, the station was found to consist of a mud and stone platform 1 foot in height, having a mark-stone in its upper surface flush with the ground, the platform was raised to 8·8 feet above the ground level. 1882-83.	22 55 29·04	75 11 24·83	$\frac{feet}{1825}$ 8·8	98, 99
Jambai Peak ...	Nizam's Territory	About 4 miles W.N.W. of the village so called, and 3 miles N. by W. of Sindphal. 1846.	20 28 5	75 30 45	...	...
Jamdi h.s. ... <i>Jambti</i>	"	On a peaked hill, about 2 miles S. of the village of that name, the same distance N.W. of Sirjapur, and 6 miles W. by S. of Kanad town on the road from Aurangabad. 1846.	20 14 48·35	75 5 23·73	...	212
Jámkhed, XXXI ...	"	See page 10—G. ...	19 40 33·04	75 41 55·24	$\frac{2174}{3·0}$	39, 41
Jámner Hill Peak ...	Khándesh	The lowest and westernmost of the three small isolated hills about ½ a mile apart and lying in a line from E. to W. About ½ of a mile S. of the town of Jámner, the road from Jámner to the village of Kodli passes by the western foot of the hill: taluka Jámner. 1846.	20 47 48	75 49 41	[984]	153
Jámnia Hill Peak ... <i>Mandogarh Pk.</i>	Dhār Stato	Of a conical hill at the S. edge of a plateau, about 2 miles E.S.E. of Mándogarh hill fort: Bheel Agency. 1847.	22 19 6	75 28 11	[2270]	128 129
Jánapáv Hill Pagoda <i>Hasarpoor H. Pag.</i>	Hásilpur Stato	A pagoda so called, surrounded by trees, on the highest point of a range of hills running N. and S., about 2½ miles E. of Jesarnagar on the high road from Bombay to Agra, and 4 miles S.E. of Hásilpur town: Holkar Territory. 1847.	22 27 33·2	75 43 45·0	[2803]	116
Jaola Hill Peak ...	Nizam's Territory	About 4½ miles S. of the village so called 1½ miles S.W. of the Megaon Chauki on the road from Dhaora to Sáyda town, and 3 miles N.N.W. of the former. 1846.	20 32 31	75 55 20	...	190
Jaora Palace ...	Jaora Stato	In the centre of the town on the Rajputana-Malwa Stato Railway: Western Malwa Agency. 1848.	23 38 16	75 10 4	...	...
Jarandi Hill Pagoda	Nizam's Territory	On a hill close to the small village of that name, about 5 miles W. by N. of the town of Baitalvádi. 1846.	20 34 7·1	75 35 36·8	...	187 188
Jatoda h.s. ... <i>Jatora Stn.</i>	"	On a hill, about 3½ miles E.N.E. of the village so called, 7 miles N.E. of Daulatabad, and 4 miles N.W. of Mangsángvi village on the road from Aurangabad to Pulmari town. 1845.	19 59 54·21	75 21 18·28	...	228

Name of Station or Point	District	Description	Latitude North	Longitude East of Greenwich	Height of Station — Height of Structure	No. of Triangle
Jatoda Hill Tree ...	Nizam's Territory	Large tree about 200 yards S.W. of the secondary station of the same name. 1845-46.	19 59 52	75 21 14	feet ...	239 230
Jhar Hill Tree ... <i>Jarandla H. tree</i>	Bulham State	Large tree at the N. end of a plateau, about 1½ miles N.W. by N. of the village of Jhar, 1 mile S. of Nunera, and the same distance N.E. of Sarwaria: Western Malwa Agency. 1848.	23 17 23	75 15 25	[1879]	89, 84
Johrapur Tower ...	Ahmednagar	Large tower in the village so called, about 3½ miles W.N.W. of Shergaon town on the road from Patthan, and 2 miles N.N.E. of Samangan on the same road: taluka Novara. 1845.	19 22 48.3	75 13 14.1	...	328
Junvāna Hill Peak <i>Mandrai Pl.</i>	Khandesh	Conspicuous hill peak locally known as Mandrai, about 3 miles N.W. by W. of Junvāna village close W. of the S.E. and 4½ miles Dhu Mālegaon to	20 46 15	74 50 9	[1875]	169 170
Kachner Hill Tree	Mandaur State	Large tree on some high ground, about ½ of a mile W. of the Holkar-Narmada State Railway, 1 mile N.W. of the village of Kachner, 1½ miles S.E. by E. of Sirsoda village on the road from Nagari to Nimod, and the same distance N. by E. of Lasuria: Western Malwa Agency. 1847-48.	23 51 7	75 8 28	[1667]	63
Kadgaon Hill Pagoda	Nizam's Territory	Pagoda surrounded with trees on a hill near the village of that name, about 2 miles W. of Nethana village, 1½ miles S.E. of Pangri, and the same distance N.W. of Nagavadi village on the road from Jāla to Aurangabad. 1845-46.	19 53 49.6	75 51 53.6	...	254
Kālādeo Palace ...	Ujjain State	On an island in the Sipra river, about ½ a mile N.W. of Kālādeo, 3 miles N. of the town of Ujjain: Western Malwa Agency. 1848.	23 14 44	75 49 0	...	...
Kālāgaon Pagoda ...	Nizam's Territory	Near the village so called on the left bank of the Dudhna river, about a mile N. of Daitana village, and 3 miles W. of Hivra village on the road from Jāla to Gansāngvi. 1845.	19 42 10.7	75 57 29.6	...	286
Kanad h.s. <i>Palashkhair</i> ...	"	About 2 miles S.W. of the town of the same name, and the same distance N.E. of Palashkhair village. 1846.	20 14 24.52	75 9 55.20	...	214
Kankraj h.s. ...	Khandesh	On a tomb on a small detached hill having the village so called at its foot, about 2½ miles E.N.E. of the large village of Bahādurpur on the left bank of the Bori river, and 4 miles N.W. by N. of the town of Farola on the high road from Dhuia to Erandol: taluka Amalner. 1846.	20 55 35.08	75 6 57.94	[861]	102 103
Kankura Hill Tree	Nizam's Territory	About a mile S.E. of the village so called on the road from Aurangabad, 3 miles N.E. of Falsi on the same road, and 8½ miles in the same direction of Aurangabad. 1845.	19 58 10	75 29 3	...	240

Name of Station or Point	District	Description	Latitude North	Longitude East of Greenwich	Height of Station — Height of Structure	No. of Triangle
Kanthária Hill Tree <i>Allote H. tree</i>	... Dowás State	Close to the village of that name on some high ground, about a mile E. by S. of Richia, the same distance S. by W. of Diálpura, and 6½ miles W.N.W. of Ghát Piplia on the right bank of the Sipra river: Indore Political Agency. 1848.	23 40 45	75 34 53	feet [1598]	62
Kapátal h.s.	... Amjhera State	This station was originally fixed by the secondary triangulation of Bhopal and Malwa Topographical Survey, and is on a little isolated hill about 60 feet above the ground to the W., ½ of a mile S.W. of the village of that name, 2 miles S.S.E. of Lergaon, and the same distance S.W. of Baloda on the road from Dasai town to Amjhera: Bheel Agency. The station was found to consist of a mark-stone buried nearly flush with the ground, but in 1882-83 four other stones were buried around it with marks engraved thereon, the intersection of lines joining them coincided with the station mark which is covered over with a cairn of stones. 1882-83.	22 39 8.50	75 7 44.05	1880	96
Karai h.s. <i>Kurrai Hill Stn.</i>	... Indore State	On a small isolated hill, about ½ of a mile S. by W. of the village of Karai, near the Indore and Gwalior state boundary, and 3 miles S. of the town of Mehidpur: pargana Mehidpur. Indore Political Agency. 1848.	23 26 38.93	75 40 41.54	[1661]	74
Karai Pagoda	... "	Between the village of that name and the tank to the W. of it, about 2 miles S. of Mehidpur town, and 1 mile W.N.W. of Lakabheri village on the road from Ujjain to Mehidpur: pargana Mehidpur. Indore Political Agency. 1848.	23 27 14.4	75 41 11.5	...	80
Káregaon Tower <i>Kaligaon</i>	... Ahmednagar	A few yards N.W. of the village of that name, about ½ of a mile W. of the right bank of the Godavari river, 3 miles E.N.E. of Khamgaon, and 4½ miles N. by E. of Dahigaon: taluka Novása. 1845.	19 33.42.0	75 14 25.4	...	325
Karsod, IX	... Ujjain State	<i>Vide page 5—G.</i>	23 6 46.48	75 28 12.70	$\frac{1781}{5}$	11
Karsod Hill Pagoda	... "	About 1½ miles W.S.W. of the village of that name, 1 mile N.N.W. of a police chauki on the road from Barnagar town to Karsod, and 5 miles N.E. of the town and Railway Station of Barnagar: Western Malwa Agency. 1848.	23 6 47.6	75 28 11.7	...	...
Kasaner h.s.	... Nizam's Territory	On a conical hill, about 3 miles S.S.E. of the large village so called on the road from Bhir Kingaon to Ambad, 1 mile E. of Darragaon, and 1½ miles N.N.W. of Farundi village on the road from Chahota Haddul to Tupvadi. 1845.	19 39 58.05	75 31 16.05	...	256 257
Kaula-ka-Máta, XI	... Sailána State	<i>Vide page 6—G.</i>	23 7 48.21	75 12 33.30	$\frac{1948}{0.5}$	12, 13
Kekatnimbhora h.s. <i>Tikutnimbhor Stn.</i>	... Khándesh	On the northern one of a small group of hills, about a mile W. of the village so called on the metalled road from Jámnor to Ner: taluka Jámner. 1846.	20 49 12.16	75 44 33.77	[1018]	152
Khámkhed Hill Pagoda	... Nizam's Territory	On the peak of a high hill, about 1½ miles W. of the village so called on the left bank of the Karpura river, the same distance S. of Chincholi village, and 3 miles W. of Pédgaon on the road from Bid town. 1845.	19 5 8.8	75 44 42.0	...	342 343

Name of Station or Point	District	Description	Latitude North	Longitude East of Greenwich	Height of Station Height of Structure	No. of Triangl.
Khandra Hill ... <i>Lasoor H.</i>	Khāudesh	Centre of a large hill in the Sātpada range, about $\frac{1}{2}$ a mile N.E. of the small village of Khandra on the left bank of the Aner river, and $5\frac{1}{2}$ miles N. of Ganpur also on the left bank of the same river: tāluko Shīrpur. 1847.	21 21 44	75 11 7	...	140
Kharvāndi Hill Peak	Ahmednagar	About the centre of $2\frac{1}{2}$ miles N.N.E. of the place E. of Nand of Nagoḷvādi: tāluka Shorgaon. 1845.	19 11 59	75 25 40	...	848
Kilanki Fort ... <i>Kalanki Fort</i>	Nizam's Territory	Centre of the hill fort, about $1\frac{1}{2}$ miles S.W. of the village of that name, 11 miles W. of Kanad town, and 5 miles S.E. of Deher old revenue station. 1846.	20 14 43	75 0 21	...	...
Kodi L.s. ...	Amjhera State	On a peak of a high range of hills lying E. of the Uri river and running E. and W., about $1\frac{1}{2}$ miles N.W. of the village of Kodi, the same distance S.W. of Dehelghāto, and 4 miles E.S.E. of Tānda town: Bheel Agency. 1847.	22 28 50.7	74 58 20.4	[1778]	...
Kolegaon Hill Tree	Nizam's Territory	About $2\frac{1}{2}$ miles W. of the village so called, the same distance S.W. of Kowdgaon, and S. of Pipra village on the road to Umrod. 1845.	19 9 53	75 38 15	...	841
Koralla Hill ...	"	The northern brow of a hill on the edge of the ghāt, near the small village of that name, about 10 miles W.S.W. of Baitalvādi, and 12 miles W.N.W. of Undongoon. 1846.	20 30 16	75 30 26	...	161
Kulali h.s. ... <i>Shendoori Stn.</i>	Khāudesh	On a hill dargah close to the village of that name on the road from Shendurni town to Pāchera Railway Station, and about 5 miles W.S.W. of the former: tāluko Jāuner. 1846.	20 38 43.38	75 37 27.52	...	162 163
Kwāla s. ...	Ujjain State	This station was originally fixed by the secondary triangulation of the Bhopal and Malwa Topographical Survey, and is on a small tank bank close E. of the small village of Kwāla on the road from Barnagar town to Pāchundo, $2\frac{1}{2}$ miles W. of Gunāwad, and $3\frac{1}{2}$ miles N. by W. of Pipra: Western Malwa Agency. When re-fixed in 1883 the station was found to consist of a platform of mud and stones, $4\frac{1}{2}$ feet in height, having a mark-stone in its upper surface. 1882-83.	22 56 1.06	75 26 30.32	$\frac{1736}{4.5}$	89, 90
Lūlgarb Hill Pagoda	Amjhera State	Large pagoda at the north end of the old fort on a flat-topped range of hills; about 2 miles S. of the edge of the Central India plateau, $1\frac{1}{2}$ miles S.E. of the village of Lūlgarb; the same distance E. of Bhatikhodra on the road from Garakui to Mendha, and 5 miles S.W. of Amjhera town: Bheel Agency. 1847.	22 30 27.8	75 5 45.1	[1790]	121 122
Laling Hill Temple	Khāudesh	White domed temple in the hill fort, about $\frac{1}{2}$ a mile S.W. by S. of the village so called on the high road from Mālegaon to Dhulia, and $6\frac{1}{2}$ miles S.S.W. of the latter town: tāluko Dhulia. 1846-47.	20 48 40.4	74 46 51.4	[936]	160 161

Nome of Station or Point	District	Description	Latitude North	Longitude East of Greenwich	Height of Station — Height of Structure	No. of Triangle
Lasulia Hill Tree ... <i>Loosaria H. Tree</i>	Gwalior State	At N. edge of a plateau, about $\frac{1}{2}$ of a mile S.E. of the village so called, $1\frac{1}{2}$ miles N.E. of Gurla on the road from Unel, and 2 miles S. by E. of the town of Unel: taluka Unel. 1848.	23 18 11	75 36 9	... <i>feet</i>	...
Limbgaon Hill Masjid <i>Nimbgaon dome</i>	Nizam's Territory	Double domed masjid, about $\frac{1}{2}$ a mile W. of the village so called on the left bank of the Nanni river, and $1\frac{1}{2}$ miles E. by N. of Roisingi village on the road to Yellim. 1845.	19 7 27.4	75 33 7.0	...	...
Lohári, VI	Jaora State	<i>Vide page 5—G.</i>	23 34 57.88	75 8 16.03	$\frac{1736}{13.4}$	7
Lupára h.s.	Ujjain State	Towards the S. end of a flat-topped hill, about $\frac{1}{2}$ a mile N.W. of the village so called, $2\frac{1}{2}$ miles E. of Jahangirpur town, and 13 miles W. of the town of Ujjain: Western Malwa Agency. 1848.	23 12 38.25	75 36 7.75	...	88
Machla Hill Peak ... <i>Row Pk.</i>	Indore State	Of a small conical hill, about a mile W. of Machla village, 2 miles S.E. of the village of Rao on the high road from Mhow to Indore, and the same distance E. by S. of the Railway Station of that name: Indore Political Agency. 1847-48.	22 37 12	75 52 53	[2279]	109 110
Machla Hill Temple	"	A small ruined temple on the centre of the large isolated hill, about $1\frac{1}{2}$ miles S. of Machla village, 3 miles N.W. by N. of Datoda village, and midway between the high roads from Indore to Mhow and from Indore to Khandwa: Indore Political Agency. 1847.	22 35 58.9	75 53 37.0	[2508]	111
Maholi Peak <i>Chermal</i>	Nizam's Territory	About a mile S.S.W. of the village of that name, 2 miles N.E. of Katagati village, 3 miles E. of Palsi on the road from Aurangabad, and the same distance N. of Barud village on the high road from Aurangabad to Akola. 1845-46.	19 56 14	75 30 6	...	237
Málagaon No. 1 h.s.	"	On a ruined hill pagoda, about $\frac{1}{2}$ a mile S. of the village of that name, 3 miles S. of Dongaon town, and the same distance W. by N. of Wagrul on the road from Jálma to Doulgaon Rája. 1845-46.	19 59 8.00	75 58 6.79	...	244 245
Málagaon No. 2 h.s.	"	On a hill, about $\frac{1}{2}$ a mile S.E. of the village of that name, 3 miles S. of Dongaon town, and the same distance W. by N. of Wagrul on the road from Jálma to Doulgaon Rája. 1845.	19 59 11.99	75 58 31.94	...	246
Manvel s.	Khándesh	On the top of a large building in the village so called close S. of the Bonak stream, about $1\frac{1}{2}$ miles S.W. of the large village of Sákli, and $3\frac{1}{2}$ miles E.S.E. of that of Dambhorni: taluka Sávda. 1846.	21 9 12.67	75 38 57.24	...	148
Mathuri, XXXIII	Nizam's Territory	<i>Vide page 10—G.</i>	19 10 34.78	75 31 46.95	$\frac{2188}{*}$	43, 45
Mohidpur Bungalow	Indore State	Colonel Sandys' bungalow at the N.W. corner of the town on the bank of the Sipra river: Indore Political Agency. 1848.	23 29 31	75 41 29	...	...

* See description of this station.

Name of Station or Point	District	Description	Latitude North	Longitude East of Greenwich	Height of Station — Height of Structure	No. of Triangles
Mehidpur Flag-staff	Indore State	At the N.W. corner of the town, and near the E. bank of the Sipra river: Indore Political Agency. 1818.	23 29 48.6	75 41 38.6	...	76
Mehidpur Jail	"	W. of the town, and about $\frac{1}{2}$ a mile E. of the Sipra river: Indore Political Agency. 1848.	23 29 22	75 41 37	...	...
Mehidpur s.	"	On the Kotwāl's Chabutra in the town: Indore Political Agency. 1849.	23 29 18.98	75 41 50.75	...	75
Mehidpur Tomb	"	Gudar Shah's tomb at the N.W. corner of a small flat-topped hill S.E. of the town: Indore Political Agency. 1848.	23 28 57.7	75 42 8.9	...	77
Mehon Hill Pagoda Mayhoon II. Pag. s.	Nizam's Territory	About a mile S.W. of the village of that name, and 4 miles E.S.E. of Solgaon on the road from Aurangabad to Bhāl. 1846.	20 21 39	75 14 53	...	...
Mhow Church s.	Indore State	On the steeple of the church in the town, about a mile W. by N. of the Railway Station: Indore Political Agency. 1847.	22 33 55.90	75 48 7.57	[1924]	118 114
Mitmita Peak	Nizam's Territory	Southern brow of the table-land from which Daulatabad hill fort is detached, about $\frac{1}{2}$ miles N. of the village of that name on the road from Aurangabad to Daulatabad, and 3 miles E.S.E. of the latter town. 1845.	19 55 18	75 18 22	...	238
Moda h.s.	"	On a hill, about 2 miles E.S.E. of the large village of that name, 3 miles N.W. by N. of Sillād on the road from Aurangabad to Ajanta, and 15 miles S.S.W. of the latter. 1846.	20 20 4.16	75 40 6.39	...	200 201
Mograha, XIV	Dhār State	Side page C—G.	22 22 44.21	75 21 38.57	2464	18
Mohāri Hill Peak Lak pk.	Khāndesh	Highest point of a hill close to the village of that name, about $\frac{3}{4}$ miles N. of the road from Shendurni to Pāchora, and $\frac{6}{8}$ miles E.N.E. of the latter: tāluka Pāchora. 1846.	20 44 29	75 30 44	...	159
Mohāri h.s. Lak Sta.	"	Near the village of that name, $\frac{3}{4}$ miles N. of the road from Shendurni to Pāchora, and $\frac{6}{8}$ miles E.N.E. of the latter: tāluka Pāchora. 1846.	20 43 57.24	75 31 15.28	...	167 158
Multānpura Hill Tree	Mandaur State	At the S.E. end of a low flat hill adjoining the hamlet of Bhimlōi, about $\frac{1}{4}$ miles S.S.E. of Multānpura, the same distance W. of the Rajputana-Malwa Railway Line, $\frac{3}{4}$ miles N.W. of Mandaur, and $\frac{1}{2}$ miles N.E. of Boroli village at the junction of the cart roads from Mandaur and Botalganj: Western Malwa Agency. 1847-49.	24 5 17	75 4 11	[1538]	...
Mundrāi Peak Mondkari pt.	Nizam's Territory	About 2 miles W. of the village of that name, 7 miles W. by N. of Kanad town, and 10 miles S. of Chālis-gaon. 1846.	20 17 4	75 4 30	...	218

Name of Station or Point	District	Description	Latitude North	Longitude East of Greenwich	Height of Station — Height of Structure	No. of Triangle
			° ' "	° ' "	feet	
Muramba h.s. ... <i>Mooramkeir Pk. Stn.</i>	Nizam's Territory	This was originally a station of the Hyderabad Topographical Survey, and is on a conical hill, about 1½ miles S.E. of the village of Muramba on the high road from Aurangabad to Akola, 2½ miles S. by W. of Ladsāngri town, and 2 miles W. of Daragaon. 1845.	19 56 15.18	75 38 47.73	...	238 239
Nagāpur Hill Mosque	"	About a mile W. of the village of that name, close N. of Ambagaon, 6½ miles E. by S. of Soigaon on the road from Aurangabad to Bhāl. 1846.	20 23 28	75 18 16	...	...
Nagda Hill	Dewās State	The point is towards the northern end of a flat-topped hill, about a mile S. of Nagda village, 4½ miles S. by W. of the Dewās town, and 2½ miles S.E. of Rasulpur village on the high road from Bombay to Agra: Indore Political Agency. 1847.	22 53 51	76 5 0	[2216]	105
Nagora s.	Dhār State	This station was originally fixed by the secondary triangulation of the Bhopal and Malwa Topographical Survey, and is about 1½ miles N.W. of the village of the same name, 1½ miles N.E. of Palwāra, and 4½ miles in the same direction of Mākni village on the high road from Rutlan to Indore: Bheel Agency. The station consists of a mud platform 5 feet 9 inches above ground level with a mark-stone in its upper surface. 1882-83.	22 49 31.45	75 23 6.03	$\frac{1784}{5.8}$	94, 95
Naktimāta Peak ... <i>Bomaldeo</i>	Barwāni State	About 2½ miles S.S.W. of the village of that name, 2½ miles S. of Sustikhora, and 3½ miles S. by W. of Mo-nimāta on the road from Rājpur to Pānsemal: pargana Pāti. Deputy Bheel Agency. 1847.	21 46 31	74 54 32	[2274]	137
Nālehha Hill Dargah	Dhār State	On a small isolated hill locally known as Telantokri, about ½ a mile S. of Nālehha town, and immediately E. of the road from Nālehha to Māndogarah: tāluka Nālehha. Bheel Agency. 1847.	22 24 38.3	75 27 0.5	[2275]	124 125
Nandi Hill Peak	Nizam's Territory	Of an isolated hill, about a mile S. of the village of that name, close to the road from Maldī village to Rohilla-gad, and 2½ miles N.N.W. of Ambad town. 1845-46.	19 39 33	75 46 22	...	301 302
Nandkhed Hill Tomb	"	About ½ a mile N.E. of the village so called, 5 miles N. of Ladsāngri on the high road from Aurangabad to Akola, and 7 miles W. of Dhabadi on the same road. 1845-46.	20 2 35.5	75 39 22.7	...	241 242
Nenod Hill Tree ... <i>Nenoond h. trees</i>	Indore State	Clump of trees on the northern and higher of two summits of a hill, about 200 yards W. of the road from Indore to Depālpur, about 1½ miles N. of Nenad village, and 5 miles N.W. of Indore city: pargana Sāmer. Indore Political Agency. 1847.	22 44 42	75 48 54	[1986]	101
Netjai Hill	Ahmednagar	A conspicuous hill close S.W. of a similar hill on which the following station is situated: tāluka Shergaon. 1845-46.	19 6 47	75 9 21	...	352
Netjai h.s.	"	On a ruined temple about 2½ miles N.W. of Mānekdāndi village, 2½ miles E.N.E. of Sāvargaon, and 6 miles S.E. by S. of the large village of Tisgaon: tāluka Shergaon. 1845-46.	19 6 54.09	75 9 26.25	...	314 315
Nigrun, III	Jaora State	<i>vide page 4—G.</i>	23 45 59.27	75 27 25.29	$\frac{1587}{10}$	4

Name of Station or Point	District	Description	Latitude North	Longitude East of Greenwich	Height of Station — Height of Structure	No. of Triangle
Nimbgaon Pagoda	Ahmednagar	Large double domed pagoda in the village of that name, about 5 miles E. by S. of Shergaon town on the road from Paithan, and a mile E.N.E. of Mālegaon: tāluka Shergaon. 1845.	19 20 6.7	75 20 47.7	...	331
Nimbgaon Tower	"	In the village of that name on the road to Shabarnaldi, and about 1½ miles N.E. of it: tāluka Nevās. 1845.	19 27 59.6	75 13 33.0	...	327
Nirud Tower <i>Niloar</i>	Nizam's Territory	Northern tower near the village of that name, about 2 miles E. of Boigaon on the road from Aurangabad to Ajanta, and 11 miles W. by S. of Bhokardhon town. 1846.	20 13 19.5	75 39 11.1	...	205
Pāchora h.s.	Khāndesh	On a hill, about 3½ miles W. of the town of that name, and the same distance E. of Bhodgaon: tāluka Pāchora. 1846.	20 41 22.93	75 22 41.60	...	178 174
Padmāla h.s. <i>Powar Thalla stn.</i>	"	On a temple on a flat-topped hill, about 5½ miles S.E. of the town of Erandol on the high road from Dhulia to Jalgaon, 3½ miles W. of the large village of Minsārad on the left bank of the Girna river, and 7 miles N. by W. of Maheji Railway Station of the G.I.P. Line: tāluka Erandol. 1846.	20 52 8.36	75 26 14.93	...	149
Paithan Hill Dargah	Nizam's Territory	On the right bank of the Godāvari river, the town of Paithan being on the opposite bank. 1845.	19 27 58.4	75 26 1.6	...	...
Pāldhi h.s.	Khāndesh	On a hill, about 2 miles S. by E. of the large village of that name on the metalled road from Erandol to Jalgaon Railway Station of the G. I. P. Line, and 4 miles N. W. by N. of Shirsoli Railway Station: tāluka Nasirabad. 1846.	20 58 57.86	75 30 50.49	[946]	147
Pallaskhed Hill Tree	Nizam's Territory	Largest and most conspicuous of several trees on a hill, about 3 miles E.S.E. of the village of that name at the junction of the roads from Jalraabad, Lonegaon and Babilgaon, 8 miles S.S.W. of Jalraabad, and 6 miles N. by E. of Dongaon. 1816.	20 6 18	75 59 36	...	243
Palsi h.s.	"	On a conical hill, about 1½ miles S. of the village of that name, 4 miles N.N.W. of Boigaon on the road from Aurangabad to Ajanta, and 6½ miles W. of Chintashaida on the same road. 1846.	20 16 11.71	75 35 45.16	...	197
Pan Chandra Hill Dipmal <i>Shendra II. Dip.</i>	"	White dipmal near the village of that name, about 3 miles N. of Jalra, the same distance E. of Rājvādi, and 3½ miles W. by S. of Dargaon. 1845.	19 53 46.6	75 57 33.7	...	258
Pancher Hill Pagoda	Rutlam State	White pagoda on a low isolated hill, about a mile S.E. by S. of the small town of Pancher, and ½ a mile E. of the cart road from Pancher to Rutlam: Western Malwa Agency. 1843.	23 26 16.6	75 3 52.1	...	81
Pārgaon Tower	Nizam's Territory	In the village of that name near the head of the Kina stream, about 1½ miles N. by W. of Mālegaon, and 1½ miles S.E. of Nagavādi. 1845.	19 12 6.5	75 28 2.8	...	347

Name of Station or Point	District	Description	Latitude North	Longitude East of Greenwich	Height of Station — Height of Structure	No. of Triangle
Pārlia h.s. ...	Jhalawar State	On a low hill, about a mile E. by S. of the village of that name on the cart road from Sitamau to Mohitpur, and the same distance S. by W. of Amrakhera village on the road from Sitamau to Gangrahar Harwarce Agency. 1847-49.	23 55 24.41	75 35 36.44	feet [1529]	53, 51
Parnaji Pagoda No. 1	Ujjain State	At the N. end of the village so called, and 1/4 mile S.E. by S. of Parnakheri village on the road from the town of Baroda to that of Kh&brauda Western Malwa Agency. 1849.	23 30 25.1	75 19 22.7	...	72
Parnaji Pagoda No. 2	"	About 100 yards W. by S. of the pagoda described above. 1849.	23 30 24.7	75 19 19.9	...	73
Parnakheri h.s. ...	"	This station was originally fixed by the secondary triangulation of the Bhagal and Malwa Topographical Survey, and is on a small isolated hill, about 1/2 mile E.N.E. of Parnakheri village, or 12 miles S.S.E. of the town of Baroda Western Malwa Agency. The station was found to consist of a platform of earth and stone about 5 feet high with a markstone in its upper surface. 1852-53.	23 31 6.86	75 19 22.79	1678 5	70, 71
Pārtar Tower	Nizam's Territory	S. of the village so called on the road from Jilga to Ambad, about 2 miles N. of the latter place, or 1 1/2 miles E. of Malh village on the road from Ambad to Bhojgarum. 1845.	19 38 49.4	75 49 43.5	...	304
Pārda Idgah Merola Idga	"	Near the village so called on the road from Aurangabad to Pathan, about 1/2 mile N. of Bile Kanga, on the same road, and 12 miles S. of Aurangabad. 1845.	19 42 46.2	75 20 35.1	...	277
Parandi Hill Pagoda	"	On a conspicuous hill, about 2 miles N. of the village of that name on the road from Chikla Haddal to Tograk, the former place being on the road from Ambad to Bile Kanga, and 3 miles S.W. of Kananer large village on the latter road. 1845.	19 40 51.9	75 32 20.7	...	280 281
Pātan h.s. ...	Dewar State	This station was originally fixed by the secondary triangulation of the Bhagal and Malwa Topographical Survey, and is on the highest point of a group of hills lying 1/2 mile W. of Halkhlera village on the right bank of the byran river, and 14 miles W.S.W. of the village of Pātan Indus Political Agency. The station consists of a platform of loose stone and earth 6 1/2 feet high with a markstone in the centre. 1852-53.	23 42 51.50	75 35 17.65	1606 6.5	60, 61
Pāthardi Hill Tree	Almoudagar	In the town of this name on the Chandol stream (Mula Shergaon). 1845.	19 10 17	75 13 7	...	...
Pimpri s. ...	"	About 1 1/2 miles S. by E. of the village of that name, 1 mile E. of Palkaral village, and 3 1/2 miles W.S.W. of the large village of Dhalgaon (Mula Nerdia). 1845.	19 29 29.51	75 10 52.01	...	320 321

Name of Station or Point	District	Description	Latitude North	Longitude East of Greenwich	Height of Station — Height of Structure	No. of Triangle
Pingrāla Hill Pagoda <i>Pinglara h. pag.</i>	Mandsaur State	On the southern of the two small isolated hills lying nearly N. and S. and named after the village which lies at the western base of the northern hill, about 2½ miles N.W. of Dhadhar Railway Station on the Rajputana-Malwa Line: Western Malwa Agency. 1848.	23 47 16.4	75 6.48.7	feet [1733]	61
Pipalgaon Hill Tree <i>Chitti Pimpalgaon</i>	Nizam's Territory	Clump of trees on a hill, about 1½ miles N.W. of the village so called, a little to the E. of the road from Aurangabad to Pátoda, and 10 miles S.E. of Aurangabad. 1845.	19 47 53	75 29 59	...	262 263
Pipla Hill Pagoda ...	"	About 2 miles S.S.W. of the village so called on the road to Unred, ½ miles N.N.E. of Thonthla, and the same distance W. of Gundavādi village. 1845.	19 10 40.9	75 37 10.8	...	310
Pokri Tower ...	"	N. tower close to the village of the same name, about 1½ miles E. of Sirādhūn village on the road from Ambad to Budnapur town, 3 miles S.S.E. of Karjil village on the same road, and 4 miles N. of Ambad. 1845.	19 40 44.7	75 48.47.5	...	297 298
Pophla, XXVIII ...	"	<i>vide page 9—g.</i> ...	20 2 20.80	75 30 33.31	2818 1.3	87
Rail h.s. <i>Rail s.</i>	"	On a temple on an isolated, conical hill, about 2 miles W. by S. of the village of that name, and 4 miles in the same direction of Kanad town. 1846.	20 14 14.74	75 6 40.94	...	210 211
Rājūr, XXIX ...	"	<i>vide page 9—g.</i> ...	20 3 43.04	75 53 34.58	2125 20.3	88
Rājūr Hill Temple	"	Most elaborately carved stone building about 50 feet in height, having two tiers of pillars above its base which is 13½ feet high, standing about 70 feet S.E. of the principal station of the same name described on page 9—g. 1845.	20 3 42.4	75 53 34.9	...	219
Rakshasbāhan s. ... <i>Rakshasbawan Idga</i>	"	On a pagoda close W. of the village of that name on the right bank of the Godāvari river and on the road from Gervāt town, and 4½ miles N.N.W. of Dundri large village on the same road. The station is marked on the Pagoda 40 feet from its centre and 12 feet from its S.W. corner. 1845.	19 22 22.35	75 40 37.47	...	310
Rāla Mandil Hill Peak <i>Moondla II. Pt.</i>	Indore State	Of a large hill, about 1½ miles E. of the village of that name, 6 miles S.S.E. of the Indore city, and 2½ miles E. of the road from Indore to Khandwa: Indore Political Agency. 1847.	22 38 44.	75 57 50	[2567]	108
Rānigaon h.s. ...	Ahmednagar	Towards the northern brow of a hill, about 1½ miles E. by S. of the village of that name, the same distance N.N.W. of Golegaon, and 5 miles S.W. by S. of the large village of Bodhegaon about a mile W. of the road from Pátoda to Paithan: tāluka Shevgaon. The station is denoted by a pillar of stone masonry, 4 feet in diameter, surrounded by a platform of loose stones. 1845.	19 15 10.38	75 26 39.04	...	329 330
Rasulpur h.s. ...	Nizam's Territory	On the table-land, about ½ a mile W. of the village so called, 2½ miles N.E. of Danlatabad, and the same distance E. of Kalgawari on the road from Aurangabad to Ellera. 1845-46.	19 58 8.03	75 17 14.74	...	221 222

Name of Station or Point	District	Description	Latitude North	Longitude East of Greenwich	Height of Station — Height of Structure	No. of Triangle
Raugon Hill Pagoda ...	Nizam's Territory	About a mile N.N.E. of the village so called, 5 miles S. by E. of Jālma town, 2 miles N.W. of Vādagaon on the road from Jālma to Gūnsāgrī, and the same distance S.W. of Sarrādi on the high road from Jālma to Ranjani. 1845.	19 46 29'6"	75 57 27'5"	... feet	291 292
Reuti h.s. ... <i>Baroli H. Mut</i>	Indore State	On a Buddhist temple situated on a hill, about ¼ mile S.E. of the village of the same name, 6 miles E. by N. of the large village of Itated on the main road from Neemuch to Indore. The Holkar State Railway is 1½ miles W. of the station: Indore Political Agency. 1847.	22 48 22'90"	75 52 54'56"	[2082]	100
Rohillagad Hill Peak ...	Nizam's Territory	About ¼ a mile S. of the village so called on the road from Ambad to Yekthun, 2 miles N.W. of Kingaon on the same road, and 4½ miles S.E. of Yekthun. 1845.	19 41 49	75 42 24	...	282
Rōza h.s. ...	"	On the S.W. corner of the Masjid on a hill, about ¼ a mile N.W. of the town of that name, and 1½ miles S.E. of Ellora on the road to Daulatabad. 1845-46.	20 0 40'20"	75 13 29'35"	...	233 234
Rui Pagoda ...	"	Close to the village so called on the road from Dadagaon to Chincholi, about 3½ miles from Bachagaon on the same road, and 2 miles N. by W. of Bauldi village. 1845.	19 29 40'6"	75 53 46'5"	...	305
Sāmner h.s. ... <i>Samner Stn.</i>	Khāndesh	On the south-eastern point of a small group of hills, about a mile N.E. of the village of this name, the same distance S.S.E. of Pāthri, and 4½ miles in the same direction of Mhasāvād Railway Station of the G.I.R. Line: tāluka Nasirabad. 1845.	20 48 38'31"	75 30 56'25"	[1012]	154
Sarola h.s. ...	Nizam's Territory	This was originally a station of the Hyderabad Topographical Survey, about 1½ miles W.S.W. of Sarola village, 4 miles S. of Golagaon Buzurg on the road from Aurangabad to Ajanta, 6 miles S.S.W. of the latter, and 9 miles N.N.W. of Dhokardhan town. 1845.	20 23 7'84"	75 45 51'82"	...	198 199
Satāra No. 1 h.s. ...	"	This was originally a station of the Hyderabad Topographical Survey, and is on the same table-land as the following station. 1845-46.	19 48 38'73"	75 20 51'94"	...	264
Satāra No. 2 h.s. ...	"	On the N.W. brow of the plateau, about 2 miles S.S.W. of Satāra town, and 1 mile E. by N. of Nalchikawari village on the road from Aurangabad to Pāithan. 1845.	19 49 5'11"	75 20 39'80"	...	265
Sātmāla, XXVII ...	"	<i>See page 9—<i>a</i>.</i>	20 20 13'97"	75 9 49'65"	$\frac{3003}{5'0}$	35, 36
Sātpuda Hill Peak <i>Nimbauran</i>	Khāndesh	A prominent point of the Sātpuda range, about 5 miles E. of the ruins of Gaurigad: tāluka Sāvda. 1845-47.	21 19 5	75 40 34	[3523]	145 146

Name of Station or Point	District	Description	Latitude North	Longitude East of Greenwich	Height of Station — Height of Structure	No. of Triangle
Savangi h.s. ... <i>Alasasa h. stn.</i>	Khândesh	Close to the village of that name, about 2 miles N. of the road from Pâchora to Shendurni, 7½ miles E. by N. of the former, and the same distance W.S.W. of Lohâra town: taluka Pâchora. 1846.	20° 42' 31" 51	75° 32' 51" 38	... feet	180 181
Sawargaon Pagoda <i>Sowlisar</i>	Nizam's Territory	Close S. of the village so called, about ½ of a mile E. of Saulesvar village on the right bank of the Godâvari river, and 3 miles N.N.E. of Dundri village on the road from Gevrii town. 1845.	19° 21' 15" 1	75° 44' 36" 0	...	311
Semlia s. ...	Dhâr State	On a strip of waste-land, about 1½ miles S. of the village of that name, 2½ miles N.W. by N. of Kânvan town, 3½ miles E.N.E. of Kod, and ½ a mile W. of the high road from Rutlam to Indore: Bheel Agency. The station consists of a platform of earth enclosing a circular, perforated pillar of masonry, 2½ feet in diameter and 5 feet in height, with an aperture on the S. side giving access to the mark-stone at the ground level. 1852-83.	22° 54' 9" 61	75° 16' 48" 15	$\frac{1774}{5}$	93
Serâttâ Tower Tree <i>Secta burj</i>	Nizam's Territory	Close to the village of that name over-looking the left bank of the Godâvari river, about ½ of a mile E. by N. of Deolâna village, 3½ miles S.E. by E. of Kâreguon, and 2½ miles N.E. by E. of Dhuignon Principal Station. 1845.	19° 32' 8	75° 17' 6	...	326
Shorapur Hill Pagoda <i>Shorapur h. pag.</i>	"	About 2 miles S. of the village so called, the same distance N. by W. of Kalapuri, and 1 mile E. of Jom village on the road from Mânâr town. 1845.	19° 4' 1" 7	75° 35' 40" 8	...	344
Shorgarh s. ...	Dhâr State	On a high swell of ground near the western edge of an extensive plateau, about 1½ miles N.W. of the large village of that name, 3½ miles S.W. by W. of Kod town, and the same distance W.N.W. of Bidwâl town: Bheel Agency. The station is denoted by a mark-stone embedded flush with the ground, having four other stones around it with marks thereon; the intersection of lines joining them coincides with the station mark. 1852-83.	22° 51' 33" 36	75° 10' 47" 69	1826	97
Shernapur h.s. ... <i>Chambartaikri s.</i>	Nizam's Territory	On a hill masjid about a mile S. of the village of that name on the road from Aurangabad to Baizapur, 6 miles W. of Aurangabad, and 1 mile E. of Karadi village. 1845.	19° 53' 6" 20	75° 16' 30" 07	...	267 268
Shirga Tower <i>Seega s. burj</i>	"	S. of the village of that name, about 2 miles S.E. of Piperi village on the road from Jâlas to Ambad, and 2½ miles E.N.E. of Lalvâdi village. 1845.	19° 40' 48" 8	75° 52' 38" 4	...	296
Sillâ s. ... <i>Shelgor</i>	"	About 200 yards S. of a Bar tree, 1½ miles E.N.E. of place so called on the road from Aurangabad to Ajanta, and 7½ miles W.N.W. of the town of Bhokardhan. 1845.	20° 18' 49" 82	75° 43' 31" 00	...	202 203
Sindkhed h.s. ... <i>Gevrii pk.</i>	"	On a hill peak about 1½ miles N.W. of the village so called, 3½ miles S. of Gaundgaon, and 6 miles S.W. of the town of Gevrii. 1845.	19° 13' 14" 93	75° 42' 42" 95	...	308

Name of Station or Point	District	Description	Latitude North	Longitude East of Greenwich	Height of Station — Height of Structure	No. of Triangle
Sindphal Hill Pagoda ...	Nizam's Territory	About 2 miles E. of the large village of that name, and 10 miles W.S.W. of Undargaon. 1845.	20 25 12.1	75 33 24.8	... feet	201
Singarchori, XV ...	Mánpur State	<i>Vide</i> page 6— <i>a</i> Note.—When visited by the Levelling Party in 1853-54, the station was found in good order.	22 24 39.91	75 42 55.62	$\frac{2891.10}{1.8}$	19
Sirádhūn Tower ...	Nizam's Territory	S. of the village so called on the road from Ambad to Roshangaon, about 4 miles N.N.W. of the former, and 2 miles N. by W. of Maldī village at the junction of the roads from Yekthun and Roshangaon to Ambad. 1845.	19 40 20.2	75 47 25.5	...	299 300
Sirasgaon Tower ...	Ahmednagar	Close E. of the village of that name, about 3 miles W. of Khamsaon, 11 miles E. by N. of Ghiregaon, 31 miles N.E. by N. of Gervāi, and 31 miles N. by W. of Pipri Sahāli: tāluka Nerāra. 1845.	19 32 59.0	75 9 15.6	...	321
Sirjapur Peak <i>Bottāik pt.</i> ...	Nizam's Territory	About 11 miles W. by N. of the village so called, 2 miles S.E. of Kolerādi village, and 6 miles W. by S. of Kanad town. 1846.	20 14 0	75 5 43	...	...
Sirsāla, XXVI ...	"	<i>Vide</i> page 8— <i>a</i>	20 29 56.24	75 33 36.25	$\frac{2790}{0.8}$	33
Sitamau, I ...	Sitamau State	<i>Vide</i> page 4— <i>a</i>	24 2 6.65	75 22 24.33	$\frac{1616}{15.4}$	23
Sitamau Hill Tree ...	"	On a small hill about a mile S.W. of the town of Sitamau, $\frac{1}{2}$ of a mile N. of the Ladūnā lake, and 1 mile N. of Dāmākhēri village close W. of the aboro lake: Western Malwa Agency. 1847-48.	24 0 16	75 23 0	...	52
Sitamau Palace ...	"	In the southern quarter of the town, and on the road to the Ladūnā lake: Western Malwa Agency. 1847-48.	24 0 48	75 23 45	...	...
Somtāna Hill Dīpmal ...	Nizam's Territory	About a mile S.S.W. of the village so called, 31 miles N.N.W. of Badnapur on the high road to Aurangabad, and 2 miles W.N.W. of Nikalāk on the road from Badnapur to Kaudari Duzurg. 1845.	19 54 18.0	75 44 2.5	...	255
Somtāna s. ...	Ahmednagar	On a pagoda about 3 miles W.S.W. of the village of that name on the road from Mánūr to Shergaon, 4 miles S. by E. of Varūr, and the same distance S.E. by E. of the large village of Amrapur on the high road from Ahmednagar to Shergaon: tāluka Shergaon. 1845.	19 15 35.35	75 16 24.54	...	332
Songarh Peak ...	Dhār State	The highest point of a conical hill at the W. end of the plateau on which is situated the old fortified town of Mándogari. The road down the ghāt to Amlikondal passes $\frac{1}{2}$ of a mile S.E. of the point: Bhēel Agency. 1847.	22 19 45	75 24 55	[2304]	126 127

* To mark-stone in upper surface of circular pillar.

Name of Station or Point	District	Description	Latitude North	Longitude East of Greenwich	Height of Station — Height of Structure	No. of Triangle
Songir h.s. ... <i>Songeer stn.</i>	Khândesh	On a detached hill immediately S. of the town of this name on the high road from Bombay to Agra: taluka Dhuin. 1846.	21° 43' 54"	74° 49' 30" 53	feet [1009]	163
Talvâda Hill Pagoda <i>Tharwar H. Pag.</i>	Nizam's Territory	On an isolated, conspicuous hill, about a mile S.W. of the large village so called, 1½ miles N. of Rokada village, and 7½ miles N.E. of the town of Gerrai. 1845.	19° 18' 16" 5	75° 53' 35" 2	...	307
Tandoli h.s. ...	Ahmednagar	On a hill, about 1½ miles E. of the village so called, 2½ miles N. of Kanosi, and 4½ miles E. by N. of the large village of Koradgaon on the left bank of the Nani stream: taluka Shergaon. The station is denoted by a mark-stone surrounded by a platform. 1845.	19° 14' 51" 61	75° 24' 0" 34	[2143]	818 819
Tarauli h.s. ...	Jhallawar State	This station was originally fixed by the secondary triangulation of the Bhopal and Malwa Topographical Survey, and is on one of a group of flat-topped hills lying midway between the Kālī Sindh and the Sipra rivers, about 1½ miles W. by N. of the village of Tarauli, and 1½ miles N. by E. of Kitia village on the cart road from Sitamni to Mehidpur; Harrowtee Agency. The station was found to consist of a very solid stone platform, 3½ feet high and 13 feet in diameter, with a mark-stone in its centre: three other stones were embedded around the mark-stone for the theodolite stand to rest on. 1832-83.	23° 54' 16" 48	75° 37' 37" 48	$\frac{1546}{3' 8}$	57, 59
Tarkha h.s. ...	Nizam's Territory	At the northern extremity of the flat portion of a high flat-topped hill, about 1½ miles N.N.E. of Mahinla village from which there is a good road to the station, 2 miles S.E. by E. of Mohori, and 5 miles S.S.E. of Pithardi town. The station is denoted by a circle and dot engraved on the rock <i>in situ</i> . 1833-84.	19° 6' 19" 93	75° 15' 28" 18	2516	350 351
Tarla h.s. ... <i>Kutban Stn.</i>	Dhār State	On an isolated, conical hill, about 1½ miles E.S.E. of the village so called on the high road from Dhār to Amjhera, and 2½ miles S.W. by W. of the town of Dhār: Bheel Agency. 1847.	22° 34' 31" 1	75° 17' 55" 2	[2022]	...
Tasdin Hill Temple No. 1	Holkar's Territory	Large temple on a very high flat-topped hill so called in the Sātpada hills. The road from Chopa to Dhūlkot passes 1 mile E. of the hill: pargana Silu. 1847.	21° 31' 18" 0	75° 25' 59" 5	[3390]	141 142
Tasdin Hill Temple No. 2	"	Small temple about 70 feet S.W. by S. of the preceding temple. 1847.	21° 31' 17" 4	75° 25' 59" 2	...	143 144
Thikri, XVII	Dhār State	<i>Vide page 7—G.</i> ... Note.—When visited by the Levelling Party in 1833-84, the station was found in good order.	22° 1' 2" 77	75° 27' 17" 16	854* 65	23
Thikri Hill Pagoda	"	A temple on a small isolated hill, about ½ mile N. of the Bombay-Agra road, ½ a mile N.W. by N. of the village of Thikri, 2 miles S.E. of Gordanpur village, and 2½ miles N.E. of Sinkāl Chanki on the high road: Bheel Agency. 1847.	22° 4' 15" 3	75° 26' 14" 3	[708]	...

* To top of rectangular protecting pillar 5½ feet high, built over circular pillar.

Name of Station or Point	District	Description	Latitude North	Longitude East of Greenwich	Height of Station — Height of Structure	No. of Triangle
Titteroni h.s. ... <i>Tittarwani stn.</i>	Nizam's Territory	On a hill, about 1½ miles N.E. of the village so called, 1½ miles S. of Tarradgaon, and 4 miles E.N.E. of Mathpuri village on the road from Ambá to Borgaon. 1845.	19 11 16	75 34 22	... <i>feet</i>	...
Toka h.s. ...	Ahmednagar	On a hill pagoda in ruins overlooking the right bank of the Godavari river, about ½ of a mile E. of the road to Aurangabad, and 1 mile in the same direction of Toka village at the confluence of the Pravara and the Godavari: taluka Niváda. 1845.	19 37 20.82	75 4 18.65	...	266
Tulvadi h.s. ... <i>Karjai Stn.</i>	Khándesh	On a hill, about 2½ miles S. by W. of the village of that name, and 4½ miles N.N.E. of Cháliggaon. 1846.	20 30 12	75 5 8	...	...
Undangaon h.s. ...	Nizam's Territory	On the highest point of a hill, about 2 miles W.S.W. of the large village so called, and 8 miles S. of Baitalvadi town. 1846.	20 27 2.05	75 41 27.48	...	192
Undangaon Hill Tree	"	About 120 yards W.N.W. of the preceding station. 1846.	20 27 3	75 41 24	...	205 206
Uncl Hill Tree ...	Gwalior State	On a small isolated hill, about 1 mile S. of the town of Uncl (Unhal), close E. of the cart road from thence to Garla, and ½ a mile N. by W. of the small village of Lasulia. 1848.	23 19 19	75 35 49	...	...
Upli Pagoda ...	Nizam's Territory	Near the village of that name on the bank of the Ajna, a tributary of the Parua river, and about 7½ miles N.W. of Chintshaida village on the road from Aurangabad to Ajanta. 1846.	20 19 23.5	75 33 37.8	...	209
Vadagaon Hill Pagoda <i>Poonegaon H. Pag.</i>	"	Near the village so called on the road from Jalna to Gunsangri, and about 2 miles S.W. of Bargaon on the high road from Jalna to Ranjani. 1845.	19 45 36.6	75 58 28.0	...	293 294
Vaduli House <i>Wadola house</i>	Ahmednagar	In the village of that name close S. of the high road from Ahmednagar to Shergaon, and about 3 miles W.S.W. of the latter: taluka Shergaon. 1845.	19 20 31	75 13 37	...	...
Vaigaon Hill Tree <i>Nandra H. Tree</i>	Nizam's Territory	On the table-land S.E. of the village of that name, about 2 miles N.E. of Dondáda village, and 8 miles N.W. of Ladsangri on the high road from Aurangabad to Akola. 1845-46.	20 1 26	75 33 7	...	...
Valvadi, XXIII ...	Khándesh	<i>vide page 8—<i>a</i>.</i> ...	20 44 27.73	75 13 34.30	* 1127.57 2.0	80
Varad h.s. <i>Warad</i>	Nizam's Territory	On a peaked hill of the Ajanta range of gháts, about 1½ miles N.W. of village so called, 1 mile W. by N. of Sntunde, and 13½ miles S. by W. of Páchora town. 1846.	20 29 5.14	75 23 15.66	...	194
Varjari Hill <i>Wurjarri pt.</i>	Khándesh	About ½ of a mile W. of the village so called, a mile N.N.E. of Nimjari, and 5½ miles N.N.E. of Shirpur town which is 1½ miles off the high road from Bombay to Agra: taluka Shirpur. 1817.	21 25 43	74 56 51	[1151]	189

* To top of rectangular protecting pillar 2.8 feet high, built over circular pillar.

Name of Station or Point	District	Description	Latitude North	Longitude East of Greenwich	Height of Station — Height of Structure	No. of Triang.
Varod h.s. ... Warow Stn.	Khândesh	On a small hill near the site of the village of that name, and about 4½ miles N.W. by W. of the town of Bhadgaon: taluka Bhadgaon. 1846.	20 43 0 29	75 15 50 81	feet ...	176
Varundi h.s. ... Warandi pk. s.	Nizam's Territory	On a hill about a mile N.E. of the village of that name, 1½ miles S. by E. of Gadadon village on the road from Pipri to Bhir Kingaon, and the same distance N.W. of Kasaner on the road from Bhir Kingaon. 1845.	19 43 17 97	75 28 26 34	...	274
Vási Hill Peak ... Wassai	"	Close E.S.E. of the village of that name, about .3 miles N.N.E. of the large village of Undangaon, 5 miles W.S.W. of Ajanta town, and the same distance S.E. by S. of Baitavadi. 1845-46.	20 29 49	75 43 38	...	103
Vatli h.s. ... Dowla Hanmant Stn.	Amjhora Sinto	On a high hill of that name on the edge of the Vindhya range, about ½ a mile S. of Dhamakheri village, and 1½ miles N.W. of Sironj village: Bheel Agency. 1847.	22 28 58 76	75 4 9 17	[1800]	118 120
Wadona Peak ... Warud pt.	Nizam's Territory	About a mile W. of the village so called close E. of the road from Temborni to Deulgaon Raja, 4 miles N.W. of the latter, and 5 miles S. by E. of the former. 1845.	20 3 46	76 2 46	...	217
Walauj Pagoda ... Naigaon Pag.	"	Close to the village of that name on the right bank of the Dudhna river and on the road from Aurangabad to Ahmednagar, and about 10 miles S.W. of the former. 1845.	19 47 58 3	75 16 4 0	...	273
Waragaon Hill Tomb	"	White tomb on a hill E. of the village of that name, and about 3 miles W. by S. of Pulhari town on the road from Aurangabad to Ajanta. 1846.	20 4 39 2	75 24 39 9	...	222
Yeklorwar Hill Dipmal Yeklara dip.	"	About a mile N.E. of the village of that name, 3½ miles S. by E. of Kurnaud village on the high road from Aurangabad to Julian, and 2 miles N.W. of Karvel village on the road from Indgaon Buzurg to Badnapur. 1845.	19 49 11 8	75 36 1 6	...	261
Yelli Hill Tree ... Pimpalgaon Tree	Ahmednagar	Conspicuous tree towards the N. end of a flat-topped hill, about 2½ miles S.E. by E. of the village so called, 2½ miles W. of Khmravandi village, and 1½ miles N.N.W. of Timburni: taluka Bhorgaon. 1845.	19 9 31	75 22 41	...	...
Yerul, XXX ...	Nizam's Territory	Vide page G—G.	19 58 37 15	75 11 34 13	2959 10	40
Yerul Hill Tree ...	"	Conspicuous Bar tree 140 yards E. of the preceding station of the same name. 1845.	19 58 36	75 11 39	...	235

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- Do. in the N.W. Provinces and Oudh, Seasons 1867-69, Sections V and VI. Dehra Dún, 1869.
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- Do. from Goruckpore *via* Bettiah, &c., to G. T. Survey Bench-mark near Parsurman, Season 1870-71, Section VIII. Dehra Dún, 1872.
- Do. from G. T. Survey Bench-mark near Parsurman to G. T. Survey Bench-mark at Pirpanti Railway Station, and from G. T. Survey Bench-mark at Purniah Church to N.E. End of Sonakhoda Base-Line; Season 1871-72, Section IX. Dehra Dún, 1873.
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